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ABSTRACT

In the second phase of a two-phase study, enterprise training in Australia was examined through case studies of training at 12 Australian enterprises in 2 sectors. The six finance and insurance enterprises and six retail enterprises studied were selected to obtain a sample that was representative from the standpoints of enterprise size and geographic location. Both industry sectors were found to be operating within an intensely competitive and increasingly deregulated environment. In both sectors, the primary drivers of training were as follows: customer focus; technological change; workplace change; enterprise commitment to training; and individual decision making. Estimates of training expenditure ranged from 1.4%-5% of payroll in the finance and insurance enterprises and from 1% -4% of payroll in the retail enterprises. The case studies confirmed the overall validity of the model of enterprise training formulated during phase 1 of the study. According to that model, three groups of factors (training drivers, mediating factors, and environmental factors) affect enterprise training. The public policy implications of the case study findings were discussed. (Twenty-seven tables/figures are included. The bibliography contains 36 references. Appended are an overview of the case studies and summary of the survey questions.) (MN)

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FINAL REPORT: ENTERPRISE TRAINING IN AUSTRALIA

June 1996

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FINAL REPORT: ENTERPRISE TRAINING IN AUSTRALIA

June 1996

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CONTENTS

Preface

1. Overview.....	1
2. The Case Studies	12
3. The Survey.....	28
4. Modelling Training.....	54
5. Implications.....	74
Bibliography.....	85
Appendix 1: Overview of Case Studies.....	87
Appendix 2: Summary of the Survey Questions	91

Preface

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1. Overview

1.1 *The context*

Over recent years governments, employer and employee organisations in Australia have been committed to a range of significant reforms of vocational education and training arrangements. Recently some of the basic principles of the reforms have been questioned and, in particular, there has been rethinking of the role of industry within the overall system.

Specifically, focus is shifting from the *supply-side* (ie public and private training providers) to the *demand-side* (ie the needs of individuals, industry and workplaces).

For this change in focus to occur in the most effective way, it is critical that all stakeholders acquire an improved understanding of:

- the priorities for training within industry;
- the factors which determine the level and nature of training they provide and require.

There is a need for research that provides some of the critical insights that will allow this understanding to develop. With this in mind, in 1994 the Australian National Training Authority, through the Victorian Office of Training and Further Education, commissioned research on how enterprises and industry approach training decision-making; current practices in enterprises and industry; and skill levels and training needs. These issues were examined in the context of policy issues such as:

- the relationship between enterprise objectives and training objectives;
- the identification of factors underlying the demand for training;
- the types of training preferred.

The 1994 (Phase One) project included thirty case studies in manufacturing and construction. The 1994 project also identified some of the major determinants of training by firms and developed a model of enterprise training. The present (Phase Two) project arose out of the 1994 project.

1.2 *This project*

Like the previous study, the research team for this project was formed from a consortium of the Research Centre for Vocational Education and Training at the University of Technology, Sydney, and the Group for Research in Employment and Training at Charles Sturt University. AGB McNair were contracted to undertake the field work for the national survey.

The brief was to:

- study training practices in individual enterprises;
- obtain information about how enterprises and industry approach training decision-making;
- examine the relationship between enterprise objectives and training practices;
- identify factors which appear to 'trigger' demand for training;
- identify the types of training preferred by industry.

It was also expected that this study would result in the refinement of the model of enterprise training developed in the 1994 project.

This project involved a national survey of firms across most industries in Australia and twelve case studies in two industry sectors: the retail industry, and the finance and insurance industry.

1.3 *The case studies*

The case studies were designed to provide an understanding of the training practices and determinants of training in the service sector of the economy, whereas the previous study focused on manufacturing and construction. The enterprises were selected to provide a range of sizes and geographic location, within the limits of the sample size. The researchers visited each enterprise for two to three days, interviewing a cross-section of staff including the chief executive officer, training/human resources manager, training specialists, supervisors, operative level staff and union delegates.

Thirty case studies were undertaken in the previous study - ten in each of the industry sectors of:

- building and construction;
- electronics equipment manufacturing;
- food processing.

These case studies identified important factors affecting the demand for training, including competitive pressure, work re-organisation, new technology, quality, industrial award re-structuring, organisation size, training infrastructure and level of training decision-making.

In the Phase Two project, twelve case studies were undertaken - six in each of the industry sectors of:

- finance and insurance;
- retail.

The Phase Two case studies are:

Finance & insurance	Retail
Hume Building Society, Albury, NSW	Myer Grace Brothers, Melbourne
Westpac Bank, Sydney	Woolworths, Sydney & ACT
St George Bank, Sydney	Mitre 10, Randwick, NSW
Sedgwick, Melbourne	Tolland Pharmacy, Wagga, NSW
NRMA, Sydney	Newman's Motor Group, Sydney
National Mutual Retail Financial Services, Melbourne	Sizzler, Brisbane

These cases provide a reasonable cross-section of the industry sectors, despite the researchers being denied access to some companies originally selected to represent the sector. Several financial institutions were unwilling to participate in this research. The reasons given included commercial sensitivities, timing of the research, the amount of staff time needed to participate, and current re-structuring of the enterprise.

Both industry sectors are operating within an intensely competitive and increasingly deregulated environment. When margins are tight (as in retailing) or deregulation has intensified competition (as in finance and insurance) enterprises frequently respond by changing their corporate strategies. In the case study enterprises, training was often seen as essential to improving competitiveness.

These case studies showed that the primary drivers of training (factors which trigger training activity) are:

- customer focus (rather than the broader concept of 'quality assurance', which was used in only a few of the enterprises);
- technological change (in finance and insurance, but not retail);
- workplace change;
- enterprise commitment to training;
- individual decision-making.

In the case of the last two drivers—management commitment to training and degree of individual decision-making—there was considerable variation across the enterprises.

All enterprises studied were asked to estimate their training expenditure as a percentage of payroll. In the finance and insurance cases estimates varied

from 1.4% to 5%. There was a range of from 1% to 4% in the retail cases. With the suspension of the Training Guarantee Act few enterprises keep complete and accurate records of training expenditure, and those that did used varying definitions of 'training expenditure'.

1.4 *The national survey*

The national survey was designed to provide a clear test of the relationships between variables in the model of training developed in the Phase One study, including an indication of the relative strength of each determinant of training. One thousand seven hundred and sixty worksites were sampled, distributed across all industries (except government administration, education, and health and community services) in order to develop an economy-wide model of enterprise training and to identify training factors for the main industry sectors.

Telephone interviews of staff at the worksites were conducted using a structured questionnaire. Questions were asked about worksite and enterprise characteristics (eg industry, number of employees), factors that may affect training, and training activity. The survey data were analysed using standard techniques and the multivariate method of loglinear analysis.

The key findings of the survey are that two main factors are strongly related to training:

- the nature of the industry;
- the size of the worksite and the size of the enterprise (formal training is much more likely to occur in large rather than small organisations).

A further seven factors were found to be weakly to moderately related to training:

- workplace change;
- industrial awards with training clauses;
- coverage of employees by industrial awards;
- business plans which include training;
- the proportion of managers and professionals in the workforce;
- quality management;
- new technology and product innovation.

Of these seven factors, the factor having the greatest influence on training variables is *workplace change*: enterprises having a high level of workplace change tend to have a greater volume and diversity of training.

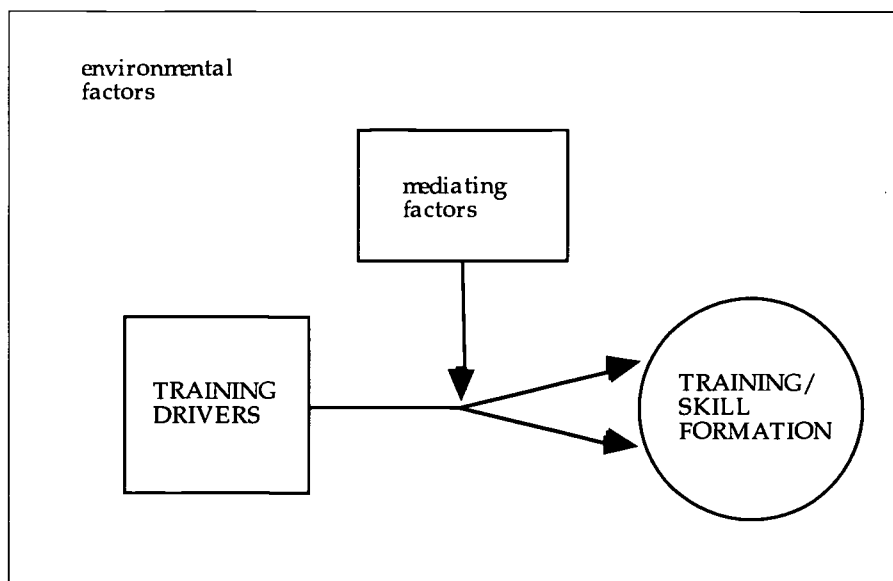
Altogether, these nine factors were found by loglinear modelling of the survey results to contribute to the optimum model of enterprise training.

Factors such as Australian or multi-national ownership, the permanency of employment of the workforce, and the competitiveness of the environment were not found to drive training decisions.

1.5 A model of enterprise training

The Phase Two research confirmed the validity of the model of enterprise training arising from the Phase One research. However, the Phase Two case studies and survey results led to refinements of the model. Three elements of the Phase One model were broadened: 'competitive pressure' and 'government intervention' elements were replaced with 'environmental factors' and the 'training structures' element was replaced with 'mediating factors'. The refined model thus has four broad elements, as illustrated in Figure 1.1.

Figure 1.1
The model of enterprise training



The four elements of the model are defined as follows:

Training drivers are factors within the enterprise which trigger training activity, and are perceived by those within the enterprise as the reason for training activity in one or more of its various forms.

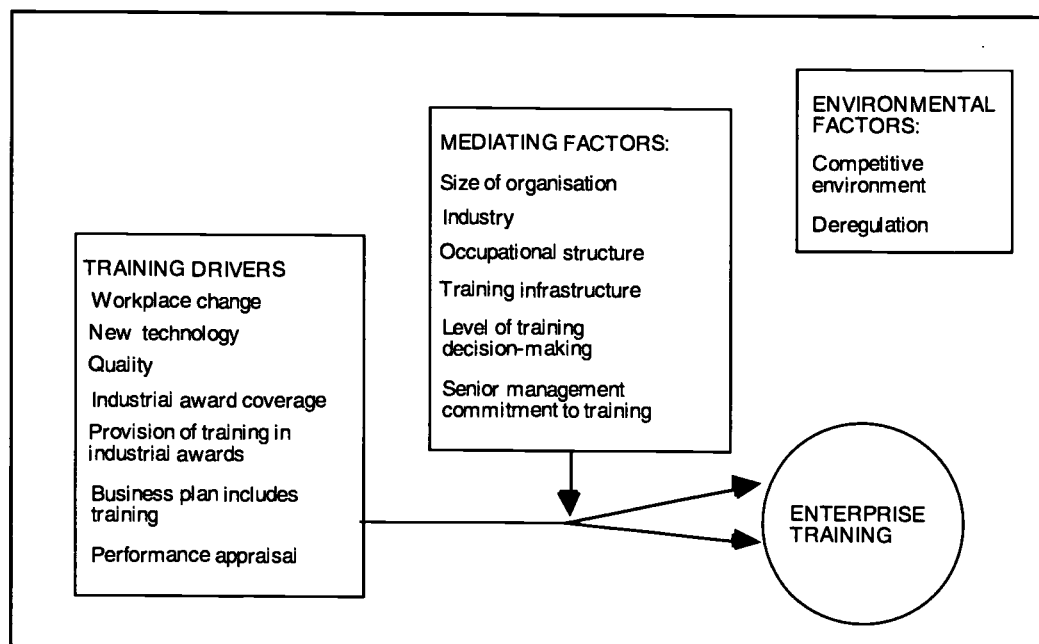
Environmental factors are conditions in the enterprise's operational environment which impact on the enterprise and tend to generate one or more training drivers. Examples of environmental factors are competitive pressure and changes in government regulations.

Mediating factors are factors within the enterprise which diminish or increase the amount of training activity and/or affect the form of training activity. Examples of mediating factors include organisation size and industry (main activity) of the enterprise.

Training is used in this model to include all forms of skill formation activity relevant to the operation of the enterprise. It may include formal and informal and on-site and off-site training and education. Several variables are needed to adequately describe the multi-faceted nature and extent of enterprise training activity. In this model, training is dependent on the training drivers and mediating factors, and indirectly dependent on environmental factors.

The three components of this research—the case studies in the 1994 project, the case studies in the current project, and the national training survey—collectively covered the important factors affecting training. Forty-two enterprises were studied in depth and a further one thousand seven hundred and sixty enterprises were surveyed in Australia. This research found that all the important factors affecting training could be comfortably classified into one of the four categories of the model. Table 4.1 in Chapter 4 lists all the factors affecting training that were identified in each of the three components of the research. Figure 1.2 shows the general model with all these main factors included. It illustrates that enterprise training (both in nature and extent) is largely dependent on seven training drivers, six mediating factors and two environmental factors, as identified in this research.

Figure 1.2
Main factors in the general model of enterprise training



The influence of these factors varies according to which particular aspect of training is considered. Six aspects of training were tested in the national survey - volume, diversity, Training Reform Agenda engagement, reliance on external training, formalisation of training processes, and individualisation of training decisions. It was found, for example, that volume of training was influenced most (in order of highest to lowest) by size of enterprise, industry,

occupational structure, new technology, and training featured in the business plan.

The model of enterprise training developed in this research provides a good representation of the factors of enterprise training and their relationships. The relationships between several of the factors and enterprise training are strong and the model explains much of the variation in training. The model also helps give an understanding of the diversity of training practices among enterprises, which is generated by the large number of training drivers and the variation of their influence on the various aspects of training.

1.6 Implications of the findings for training

The results of the case studies and the national survey mostly support the findings of other research and theories of training reported in the literature. However the findings suggest that the relationship between training drivers and enterprise training is not as clear cut as previously thought, and this has a number of implications for public policy. Implications of the findings of this study are considered in detail in Chapter 5 and are summarised below.

Diversity or uniformity?

The case studies illustrate the richness and diversity of the responses of enterprises to training demand, while the survey data show that underneath this diversity there is a degree of regularity and predicability. This has important implications for the ways in which public vocational education and training providers interact with enterprises to help them respond to demands for skill enhancement.

Industries characteristically differ both in the amount of training that they engage in and the ways in which they do it. The case studies in particular have shown that within any given industry enterprises shape their own course, frequently having little regard for industry-wide arrangements. A public sector response that is appropriate for a large enterprise within any one industry might not be appropriate for one that is of medium size, and neither response might be appropriate for the very small firm. Policy or program interventions that suit the small firm in one industry might not suit a comparably sized firm in another. These are common sense propositions that are frequently ignored when constructing policies and programs.

Change, innovation and training

Enterprises in which:

- all levels of staff have experienced change in their range of tasks;
- decision-making has become decentralised;
- there has been an increased emphasis upon teamwork;

- internal communication has been improved

(all common responses to greater competition, new production technologies and the quality imperative) are likely to spend more on training and to have more staff participate in training. They also have a richer mix of training responses than firms that have experienced a less dynamic operating environment.

The firms that report having experienced the greatest rates of workplace change are among the most likely to draw upon the resources of public, private and community based external providers. They are also more likely to formalise and evaluate their training effort.

These findings provide strong empirical support for the propositions that:

- the ongoing pace of workplace change, the increase in the competitiveness of Australia's business environment, and the globalisation of the Australian economy will result in ongoing growth in the size and diversity of the Australian training market;
- ongoing workplace change in Australia is likely to lead to an increase in the quality and diversity of firms' internal training and development strategies, and to an increasing interaction between firms and a range of public, private and community based providers of learning.

Industry

This study confirms previous findings that show that industry is strongly related to enterprise training effort. However, the finding that industry is strongly and systematically related to the character of demand for training has not previously emerged from Australian research. This study has shown that as a function of the industry to which they belong, firms characteristically differ in:

- their reliance upon external training;
- their reliance upon accredited and regulated training qualifications;
- their engagement with public competency standards and training regulation arrangements;
- the range and variety of training methods that they adopt; and
- the extent to which they formalise their internal training processes.

This is an important finding because it breaks down the industry variable and explains that its significance lies in the nature of institutional arrangements for vocational education and training within particular industries, and in the cultures and traditions of particular industries.

Industries, and the occupations that are differentially distributed across them, differ significantly in the extent to which they have been able to capture public agendas and public arrangements for the provision and regulation of training. Results of the study suggest that variation between different industries in the institutional arrangements for vocational education and training influences the level and character of training within particular enterprises. This reinforces much of the impetus for recent reforms to vocational education and training aimed at ensuring a fairer and more efficient use of public resources by different industries and occupational groups. The study's results imply that improvement to the quantity and quality of enterprises' skill formation practices will not flow simply from changes in the external economic and labour market environment within which they operate, nor simply from their own internal workplace reforms. Reforms to institutional arrangements for the provision and regulation of vocational education and training, such as the wider provision of recognised programs for operative workers, are also important.

Size

The present study shows that small firms characteristically rely upon a narrower range of types of training than large firms, and are less likely to rely upon explicit competency standards. Small firms depend less upon formally accredited training, and are unlikely to be registered as an accredited training provider. The results of the study suggest that this is likely to be a matter of a poor fit between what is on offer and what is needed.

Small firms do not simply have different levels of demand for training. At any given level of demand, they express their demand in characteristically different ways. It is these characteristic differences that need to be more carefully addressed in shaping public policies and practices.

The survey data suggests that in most cases outcomes will be just as effective when linking with enterprises at the level of the local worksite as when linking with them at the national, state, or organisational level. Both the case studies and the survey suggest that the local worksites of large organisations often have a fair degree of discretion in determining their training needs and how these will be responded to. This suggests that training providers could increase their focus upon the needs of local worksites, whether or not these are constituent parts of large organisations.

Industrial relations

The survey showed that enterprises in which a high proportion of a worksite's employees were perceived to be covered by awards or enterprise agreements were those that placed a heavier reliance upon external accredited training. These enterprises had structured entry level training arrangements and used competency standards to determine training content. Their internal enterprise arrangements had public accreditation and they had a more formalised approach to the internal monitoring and evaluation of training. Such findings suggest that any weakening of such negotiated arrangements under different institutional frameworks for industrial relations

could alter the character, and perhaps the scale, of enterprises' training activities.

The enterprise or the individual?

The results of the present study suggest that a distinction between the needs of the individual and the needs of the enterprise can be quite artificial - even when looking at enterprise demand for training. Results show that many enterprises quite deliberately vest considerable responsibility in the individual to select their own training. Within their own internal mechanisms many enterprises appear to translate demand into supply by relying upon individual employees' knowledge of their own needs and preferences, rather than by relying upon centralised employer assessment of needs.

These findings point to a need for vocational education and training providers to develop effective mechanisms to determine individuals' training needs, even in cases where their principal concern is the needs of the enterprise.

1.7 Reporting the results

Reports from this project Industry Training Studies: Approaches to Training Decisions and Skill Levels in Australian Firms:

Final Report: Enterprise Training in Australia, J. McIntyre, P. Petocz, G. Hayton, C. Noble, A. Smith and P. Roberts, June, 1996

This final report gives an overview of findings from the case studies and from the national training survey. It then describes a general model of enterprise training derived from these findings. Finally it presents some implications for the theory, policy and practice of training.

Enterprise Training in Australia: Industry Profiles and Case Studies, C. Noble, A. Smith and A. Gonczi

This report describes competitive pressures and training arrangements in the retail industry, and the finance and insurance industry; as well as key findings from the case studies. It also includes descriptions of the twelve cases from these two industries.

Enterprise Training in Australia: The National Enterprise Training Survey

This report contains key findings from the national survey of training practices from a sample of 1760 firms across all industries in Australia.

Earlier reports

In 1994, the Victorian Office of Training and Further Education and the Australian National Training Authority commissioned research on how enterprises and industry approach training decision-making; current practices in enterprises and industry; and skill levels and training needs. The following reports resulted from this research:

Enterprise Training: The Factors that Affect Demand - Final Report, Industry Profiles and Case Study Analysis, A. Smith, G. Hayton, P. Roberts, E. Thorne and C. Noble, December, 1994.

- *Volume 1*: The analysis at the industry level and cross industry level, and a range of conclusions relating to training decision making and demand formation within enterprises.
- *Volume 2*: The case studies from the building and construction industry.
- *Volume 3*: The case studies from the electronics equipment manufacturing industry.
- *Volume 4*: The case studies from the processed food and beverage industry.

2. The Case Studies

The aim of the case studies component of the project was to identify the training behaviour of individual enterprises in finance and insurance, and retail trade through a literature search, industry analysis and twelve case studies.

The focus of the case studies

In particular the project examined the following issues:

- the nature and structure of the industry sectors selected for analysis;
- current training practices in the sectors;
- current levels of skill formation;
- how training decisions are made and the determinants for training in the enterprises and industries;
- the relationship between enterprise objectives, training practices and skill formation;
- the predicted relationship between future enterprise objectives and future skill formation needs;
- factors that trigger the demand for training in the enterprise;
- who makes decisions about which employees receive training and what type of training;
- the type of training enterprises prefer;
- how enterprises determine the effectiveness of their training;
- the future training needs of the enterprises and industries.

This chapter describes the main findings of the twelve case studies.

2.1 Methodology

The selection of cases was a critical step in ensuring the quality of data. The twelve cases were selected from a list of approximately twenty potential cases drawn up with the following factors in mind.

- Industry sector. The cases are evenly divided between the two industry sectors. Within each sector the cases cover a range of sub-sectors. In finance and insurance the enterprises include two banks, a building society

and three insurance companies. The retail trade enterprises are a department store, supermarket, pharmacy, motor vehicle dealership, hardware store and fast food restaurant.

- Training arrangements. The cases include enterprises judged to be 'best practice' and/or committed to the national training reforms, and some that are ad hoc in their approach.
- Geographic diversity. The case study sites are located in three States, primarily Victoria and New South Wales, with one case in Queensland. Two enterprises are in regional centres.
- Gender diversity. Unlike Phase One, gender diversity was not used as a selection criteria. However, as the selected industries both have a high proportion of female employees, the cases focus on the extent to which enterprises make provision for people under-represented in vocational education and training.
- Employer size. Enterprises range from small to medium companies to those with over 500 employees.
- Nature of ownership. The cases include sole traders, franchises, companies listed on the stock exchange and multi-national corporations.

Access is an important issue in any case study based project. Employers have to agree to participate and commit resources to enable the research to take place. This inevitably limits the representativeness of the sample of cases within their industry sector. Within these limits, a reasonable cross-section of the industry was obtained. The case studies are listed in Table 2.1.

Table 2.1
The twelve case studies

Finance & insurance	Retail
Hume Building Society, Albury, NSW	Myer Grace Brothers, Melbourne
Westpac Bank, Sydney	Woolworths, Sydney & ACT
St George Bank, Sydney	Mitre 10, Randwick, NSW
Sedgwick, Melbourne	Tolland Pharmacy, Wagga, NSW
NRMA, Sydney	Newman's Motor Group, Sydney
National Mutual Retail Financial Services, Melbourne	Sizzler, Brisbane

Considerable difficulty was encountered in arranging suitable cases, especially in the finance and insurance sector. Industry bodies provided assistance in identifying cases, but despite this assistance several financial institutions were unable to cooperate with the research. The reasons given included commercial sensitivities (training is considered to be a competitive strategy), timing of the research, commitment of time required by the enterprise in organising interviews and making staff available, and that the enterprise was in the process of re-structuring.

2.2 *The industries*

Finance and insurance

Finance and insurance is a diverse industry sector which is part of the finance, property and business services industry. It covers:

- the banking system;
- financial intermediaries including life assurance companies, building societies, credit unions, finance companies and merchant banks.

Following financial deregulation after 1984, the finance and insurance sector has become highly competitive. General features of the sector in recent years have included mergers and amalgamations, entry of foreign banks and other financial institutions, change of status (eg from building society to bank), diversification of financial services, and computerisation.

This sector is above the industry average in percentage of wages and salaries, and dollars devoted to training employees (ABS, 1993: 8). The finance and investment sub-sector is slightly above the industry average in hours per employee devoted to training (5.6 hours compared with an average 5.1 hours). Insurance, on the other hand, is well above the average with 10.0 hours per employee.

Large numbers of female employees work within the sector. As there is evidence that female workers receive less training than their male counterparts, the services sector is an important area for investigations.

Retail

The retail industry sector is part of the retail and wholesale industry. Major groups within the retail sector include:

- department stores;
- variety stores;
- supermarkets;
- fast food stores;
- hardware stores;
- pharmacies;
- motor vehicle retailing.

The retail sector (excluding motor vehicle retailing) employed over one million people in 1991-2, and has a high proportion of females in the workforce. It also has a wide range of business sizes, from many one- or two-person businesses up to very large businesses employing thousands (eg Coles Myer and Woolworths).

In contrast to the finance and insurance industry sector, the retail sector is well below the industry average in training expenditure as a percentage of wages and salaries. In 1993 training expenditure was 2.4% of retail and wholesale wages and salaries—ranking 9th out of the 11 industry categories.

The retail industry sector was chosen for investigation because of its significant size in the service industries workforce and, in contrast with finance and insurance, its relatively low training expenditure.

2.3 Similarities and differences between the industry sectors

The case studies are all from two service industry sectors and it might therefore be expected that they have several features in common. This was found to be the case, however, there are some important differences between the industry sectors as well.

Similarities between the industry sectors:

Nature of the industry

The industry sectors are intensely competitive and are operating within an increasingly deregulated environment. When margins are tight (as in retailing) or deregulation has intensified competition (as in finance and insurance) the case study enterprises frequently respond by changing their corporate strategies. Training is often seen as essential to improving competitiveness.

Staffing profiles of the sectors are similar. Both sectors have a high proportion of female employees and for most enterprises there is a trend towards more part-time employees.

Technological change is regarded as imperative to improving customer service and efficiency, especially in the finance and insurance sector.

Features of training

In most enterprises operational managers make training decisions for their staff. This is more likely to be within the framework of corporate strategy for finance and insurance than for retailing. Individuals have an important role in training decision-making in both sectors, subject to management approval.

Key drivers of training are customer service, the level of enterprise commitment to training, and workplace change. The training activities that are almost universal are induction (orientation) and management development.

External providers are widely used. On-the-job training and on-the-job coaching are important training methods across both sectors. There is a low level of awareness of the national training reforms. The suspension of the Training Guarantee Act has had little impact.

Differences between the industry sectors

There was a lower level of innovation in services and products in the retailing case studies, compared with finance and insurance. There are no clear explanations for this difference, especially as competition is, if anything, more intense for the retail cases. The finance and insurance cases are introducing innovations in technology, products, services and structures. For St George, Westpac, and Hume Building Society the changes are driven by competitive pressure and the need to improve customer service. In particular Hume considers it essential to be technologically advanced to keep up with its larger competitors. It recognises that quality service is dependent on the technological competence of the staff.

The retail sector cases were not driving the development and adoption of new technology to the same extent as the finance and insurance cases. The major retailers (Myer Grace Brothers and Woolworths) focus on training to operate equipment. Department store retailing requires that staff develop competency in technical procedures very quickly. For the other retail cases technology based training fills specific needs such as training in new computer systems (Mitre 10) or new equipment (Newman's). Although innovations of the kind mentioned are an important driver of training in finance and insurance, there are only isolated cases of this in retailing.

2.4 The organisation and management of training

There are more examples of a systematic approach to training in the finance and insurance cases than in retailing. Finance and insurance has more cases where training is planned rather than ad hoc, performance appraisal is linked with training, and training committees are used in decision-making. The finance and insurance cases are more likely to have developed a corporate strategy that includes training, than the retail cases.

Systematic approach to training

The main indicators of a systematic approach are:

- the existence of training plans;
- formal needs analysis;
- evaluation;
- assessment of the costs and benefits of training.

Adherence to a systematic approach does not mean that one enterprise's training is better than another's. The case studies necessarily reveal considerable diversity as enterprises attempt to develop an approach that best suits their situation.

The organisation and management of training varies considerably across the cases and between sectors. In general, the finance and insurance enterprises are quite systematic in their approach; whereas for most of the enterprises in retail trade, training cannot be described as systematic.

Planning and formal needs analysis

In those enterprises that follow a systematic approach there is usually a combination of training plans and formal needs analysis linked to corporate strategy. Performance appraisal is also used by these enterprises to identify the training needs of individual employees. In some cases small size explains why an enterprise has a less systematic approach to the organisation and management of training than other enterprises in the sample. Stirling Homes (Phase One) and Tolland Pharmacy (Phase Two) are examples of firms in this category. However, size alone does not explain why some enterprises have rejected a systematic approach. One large financial enterprise, for example, considers that formal needs analysis is out of date, expensive, rigid and not promoting the new discourse of continuous learning.

Evaluation and assessment of costs and benefits

Evaluation of training is relatively undeveloped in most enterprises across the sectors. Despite the evident commitment to training as a competitive strategy in most enterprises, there was a conspicuous lack of attention to the impact of training on productivity or profitability.

The typical approach to evaluation consists of the distribution of evaluation questionnaires—euphemistically described as ‘happy sheets’ by one training manager—at the end of training sessions. There was little evidence of follow-up to evaluate whether training produced the expected benefits. Similarly, no enterprise attempts to measure the full costs or benefits of training.

Training decision making and infrastructure

As in the Phase One case study industry sectors, training decision making in the retail, and finance and insurance enterprises was usually made at two or more levels, from the individual through to senior management. The structures for organising and managing training vary considerably; however, there is a pronounced trend away from centralised training departments in both sectors. Corporate training functions still exist in some organisations, but their roles tend to focus on coordinating training and internal consultancy. Large enterprises stand out in having a well-developed training infrastructure, operating at two or more levels (national; State; enterprise; or national and enterprise). In keeping with the internal consultancy role for training managers and others with training responsibilities, enterprises are making considerable use of external training providers.

Training committees have an important role in training decision-making in some enterprises in the finance and insurance sector eg Westpac, Sedgwick,

NRMA, but in the retail sector only one large enterprise, Woolworths, has such a committee.

Training and industrial relations

Enterprise bargaining is starting to develop but has not become a key driver of training in either sector. Training has been incorporated in enterprise agreements at Westpac and St George in the finance and insurance sector and at Woolworths in retailing.

Impact of national competency standards

There is considerable variation in the coverage of competency standards within the enterprises. In the finance and insurance cases all except one enterprise are committed to developing and using competency standards. Industry-wide national competency standards have been influential, but enterprises in this sector have either adapted national standards to their situation or have developed enterprise-specific standards that have not been accredited nationally. NRMA's approach is indicative of how industry standards and enterprise standards can be merged. This enterprise uses the established industry competencies as a base framework, but has built on them to suit its needs. Both banks in the sample use enterprise standards that are not accredited nationally. Westpac accepts that there may later be a national approach.

In the retailing cases, competency standards had an impact in three enterprises (Myer Grace Brothers, Woolworths and Tolland). For the rest, there was a lack of awareness or indifference to national competency standards. Once again the large enterprises were the most committed. Myer Grace Brothers has developed enterprise specific management competency standards and intends to use the Wholesale and Retail Industry Training Council (ITC) standards as the basis of Coles Myer traineeships in 1996. Woolworths competency standards are being nationally validated before being submitted to ANTA for accreditation, and recognition of prior learning procedures are to be formalised. Woolworths aims to align its training with the endorsed curriculum. In Tolland's case competency standards do not play a significant role, except for recognition of prior learning of staff which uses the competency standards.

Industry Training Advisory Bodies (ITABs) and Industry Training Councils (ITCs) had relatively little impact on the case study enterprises. In the retail sector only one enterprise is actively engaged with ITABs and ITCs. There was even less involvement in the finance and insurance sector where an effective ITAB/ITC network has yet to be established. The Finance and Administration ITAB is still developing an industry training plan and the banking sector shows no sign of wanting to become involved.

2.5 Drivers of training

The cases revealed a range of findings about the general drivers of training in the enterprises. These findings are summarised below.

Customer focus

The emphasis on customer service is common to all enterprises in the sample. Faced with strong competition, enterprises look to ways of improving their market share and/or retaining their existing customers. In both sectors induction or orientation training is viewed as essential to ensure that new staff are able to deal effectively with their customers. It is also important for existing staff to be kept up-to-date with procedural, technical and product requirements and changes. This type of training is often on-the-job. In some enterprises managers have a role in coaching their staff.

It should be noted that quality assurance, as such, was not emphasised in the majority of case studies. Few enterprises in either sector are formally committed to quality assurance or total quality management. They do, however, emphasise the focus on customers and this may be regarded as a specific quality initiative.

Following are two examples of organisations in which customer service focus is a driver of training.

a. Woolworths

Woolworths has undergone a dramatic transformation over the past decade, with the nadir being a trading loss of \$17 million for the 1986-87 financial year. In recent years, customer patronage has shown strong growth with an increase of 8% in customer transactions taking it to \$470 million at the end of the 1994 financial year. The company achieved greatest sales growth through an increase in the number of young shoppers (under 25) as well as attracting a large share of family shopping budgets.

Woolworths invests in training to maintain its customer service focus and edge in an environment characterised by significant competitive pressures and fierce marketplace attention to both market share and position. Store management share this need for effective customer service and are keen to encourage their department managers to place continued emphasis on on-the-job coaching to ensure this focus is maintained.

b. St George Bank

In 1992 the bank commenced with total assets of \$9,353 million. By 1994 this had grown to \$15,895 million, an increase of nearly 70%. The main activity of the bank involves the delivery of banking and financial services to private and commercial customers.

Customer service is perhaps the company's major source of competitive advantage and is dependent on a people-centred approach. Employees must enjoy coming to work, become strongly bonded to the company, be highly motivated and remain loyal.

Customer service, revitalised marketing and 'people-centredness' were the strategic objectives most frequently cited by training specialists as affecting training. The customer service objective requires large training investments in order to ensure that branch assistants are able to provide skilled service to customers. This training is ongoing because of the company's continuing diversification. Keeping up with competitors in the customer service area meant keeping up with new technology and this has meant ongoing branch assistant training. The requirement to ensure the company is 'people-centred' is the driving force behind the induction process and its aim to build a workforce committed and loyal to St George.

Technological change

New technology is an important driver of training in the finance and insurance sector. Both sectors use induction programs to familiarise staff with relevant technology. Technological change is widely regarded as a means of improving customer service; eg by improving access to banking services through EFTPOS and ATMs. It follows that training in the use of technology is often linked to customer service.

Enterprise commitment to training

Industry-wide collaboration on training issues provided a platform for individual enterprises to develop their training arrangements. This was seen in the Phase One case studies in the processed food and beverage industry where the national Certificate of Food Processing has been an important initiative in providing formal structured training that can be customised to the enterprise's internal operational requirements. Similarly, the finance and insurance industry has developed a strong tradition of training and has well-established arrangements developed by industry associations to service its needs.

A strong industry tradition of training does not ensure that enterprises become committed to training. If managers are cynical about training or an emphasis on the bottom line dominates, there may be insufficient momentum at the industry level to ensure that training is fostered by enterprises.

The role of management in promoting a positive attitude to training was evident in several enterprises. In retailing, management commitment was strongest in the largest enterprises. However, in finance and insurance strong commitment was evident across the sample. Senior managers had a critical role in most enterprises in determining the amount, direction and type of training. At the operational level, line managers have frequently been delegated responsibility for training. They make decisions about the training priorities of their staff, either on an ad hoc basis or guided by a corporate

strategy such as quality management. In some enterprises there is a blending of corporate-level and operation-level training decisions rather than a rigid division between them.

Individual decisions and performance appraisal

The context in which individuals make training decisions varies considerably between the case studies. In enterprises that follow a systematic or structured approach the context is shaped by corporate strategies and/or priorities determined by management. Some enterprises, especially in the finance and insurance sectors, use training committees to consider each individual's proposals as part of the planning process. Performance appraisal is another element of a structured approach. The typical approach in the finance and insurance sector is to have an annual performance review at which staff or managers identify the employee's training needs. Enterprises in the retail sector have not, for the most part, developed performance appraisal.

In most enterprises training decisions by individuals have an informal aspect. In some enterprises staff are encouraged to have a key role in training decision-making by identifying courses and seeking the approval of their manager. Individual initiative is especially important at the managerial and professional levels.

Individual decision-making is only rarely linked to an enterprise system of career planning. Enterprises in the finance and insurance sector often encourage or require their staff to undertake professional development programs that are related to career progression. The training system needs to accommodate both the requirements of enterprises for specific training programs, and the needs of individuals for more general career-orientated training requirements.

Workplace change

The markets in which the enterprises operate are intensely competitive. All of the enterprises in the finance and insurance sector, and several in the retail sector have responded with extensive organisational changes. Changes observed in the cases include:

- re-structuring including decentralisation of decision-making, reduction in the layers of management, and the introduction of team based work organisation;
- fundamental changes in corporate culture involving the creation of 'learning organisations';
- staff reductions (downsizing) to improve efficiency;
- the introduction of quality assurance;

- strategies to reposition the enterprise in the market.

Some of these changes have direct and indirect implications for training. Re-structuring may involve training to assist staff adjust to change, as in training related to the introduction of teams. The enterprises undergoing significant cultural change have made training an integral part of the process.

Changes in managerial roles are important drivers of training. Management development programs designed to assist managers adjust to change and inculcate changes in corporate culture are particularly important for large enterprises.

Following are two examples of 'learning organisations' from the case studies, where workplace change is a significant driver of training.

a. Westpac

Following a record loss Westpac underwent major board-level changes as well as the appointment of a new chief executive who had successfully managed a major upheaval in a similar organization. These developments brought a new management approach in which time-honoured procedures were critically questioned.

Generally the aim is to change Westpac's culture to that of a learning enterprise. It is recognised that there is still a lot of work to be done before it is generally acknowledged in Westpac that training is not necessarily the same thing as learning. The challenge is seen as the creation of a culture in which staff *want* to learn.

The old view of training as paid leave to attend a course somewhere else is being gradually replaced by the concept of the workplace as the site of continuous and ongoing learning and development. While Westpac has a long way to go to become a true learning organisation, it has already made significant advances in its efforts to develop a new culture.

b. National Mutual Retail Financial Services

In 1994 National Mutual RFS introduced a learning program entitled the Learning Framework through which a strategy of continuous 'learning for change' is organised and implemented. The program was instituted to facilitate the change in culture required to implement major objectives of the re-structured workplace, such as achieving a competitive edge in customer service

In the implementation of the Learning Framework a rigid training needs analysis has been specifically avoided, because it is considered to be time consuming, expensive and focused on existing skills rather than future skills. Such rigidity would also fail to promote the new discourse of continuous learning. The Learning Framework draws on the ideas of Peter Senge and is

focused on developing a 'what is possible' way of thinking amongst staff through ongoing learning.

The Learning Framework consists of a core skill development program tailored to meet the needs of all staff within the organisation, from the executive group to service operators. The core themes are:

- best practice organisations;
- customer service;
- quality tools—continuous improvement, problem solving and decision-making, and teams;
- self development and career awareness;
- leadership and coaching.

The program is delivered on-site by a consortium of consultancy groups who feed information on case studies, work-based projects and the experiences of other enterprises into the training/learning.

There is evidence that staff are already doing things differently. The human resources manager described simple team-generated design solutions to problems such as slow processing of mail and difficult-to-understand customer statements.

2.6 Diversity of training arrangements

The term 'training arrangements' refers to any of the training activities undertaken by employees of the enterprise. It can include training which is internal or external to the enterprise, and informal training or learning activities.

There was considerable variety in training arrangements across enterprises and sectors. The mix of factors that drive training was different and the training structures tended to differ significantly. The result was that the arrangements were different, despite the perceived similarity of several enterprises in terms of their service orientation and market position.

Formal internal training

Formal internal training involves developing, organising and conducting a training program using the enterprise's resources. All enterprises except one small retailer provided some formal internal training. The small retailer used a combination of external training and informal training. Induction was the most common type of training, and often consisted of a mix of formal and on-the-job training. Some medium size enterprises were able to access the resources of a corporate training department. In most large enterprises

formal training is well developed. These enterprises are able to take advantage of economies of scale to develop training facilities and employ specialist training staff.

Informal internal training

The main characteristics of informal training are that it is unplanned, unstructured and not documented. Informal internal training requires little or no training infrastructure and developmental costs are low. This type of training was used by all enterprises in the sample. It was common to find informal training being used for induction, and to develop the requisite knowledge and skills to effectively serve customers. Several retailers emphasise product knowledge in this training. In some cases managers are developing a coaching role to develop the attitudes and skills of their staff.

Large enterprises seem to value informal training as much as small enterprises. They realise that informal training has the advantage of focusing on workplace issues and priorities at relatively low cost. Informal internal training per se may be insufficient to give an enterprise a competitive edge, however in conjunction with formal internal and external training it may form an important competitive strategy.

Table 2.2 compares the emphasis given to informal and formal training in large and small enterprises. It challenges the idea that as enterprises grow the opportunities for informal learning decrease and the requirements for formal training programs increase.

Table 2.2 Formal and informal external training tendencies in the cases		
Firm size	Formal training	Informal training
Small	Common, except in very small enterprise. Used mainly for induction.	Used by all small enterprises.
Large	High	Increasingly common within structured framework.

External training

All case studies used external training. In the finance and insurance sector external training was widely used for professional development purposes. This involves the use of courses conducted by professional bodies, usually leading to accreditation. In some enterprises such training is essential for career advancement.

Several enterprises have well-established links with universities. Course articulation arrangements have been developed to provide recognition for non-award courses and to allow formal qualifications to be acquired in stages in the employee's own time. Study support schemes in many enterprises provide time release and other assistance including payment of fees where a course is relevant to the employee's career.

Management development programs often have an external component. In some cases they involve accredited courses such as graduate certificates and masters of business administration. Consultants are engaged by some enterprises to deliver short courses in areas such as team building and human resource management. Table 2.3 shows that while internal training may be more formalised in large institutions, informal training is still important.

Table 2.3
Internal and external training tendencies in the cases

Firm size	External training	Internal training
Small	Is provided	Often involves a combination of formal and informal training.
Large	Is provided	Mostly formal, but often with an informal element.

It is important to note that the case study enterprises made little use of the VET sector. There were some complaints that TAFE courses were too general to be relevant. Only one enterprise had established a close relationship with its local TAFE college for different types of training. Apprenticeships are relatively uncommon in both sectors, where the technical skills required are not those usually associated with apprenticeships such as motor mechanics and baking.

Technical skills and soft skills training

'Soft skills' describes all non-technical skills, particularly interpersonal and communication skills. In service industries, technical skills refer to the professional skills required to do a job, such as the skills required to be an insurance broker or a financial adviser.

Increasing emphasis is being given to soft skills in both sectors. This is explained largely by the emphasis given to customer service in response to competitive pressures. Workplace changes involving the introduction of team work or changes in managerial roles is another factor that leads to a focus on soft skills.

Generic and specific skills training

'Specific skills' are skills specific to the enterprise in which they are primarily useful and are relevant only to a single enterprise. Industry-specific skills which are not specific to a single enterprise are classed as generic.

All enterprises studied use a combination of generic and specific skills training. The banks stand out as the enterprises that place most emphasis on specific skills training, but even they place reliance on generic skills acquired through formal education. Table 2.4 summarises the trends observed in the cases.

Table 2.4
Generic and specific skills training tendencies in the cases

Firm size	Generic skills training	Specific skills training
Small	Internal and external	Internal; formal and informal
Large	External—but sometimes with an internal component	Internal; formal and informal

Vendor training

Training by vendors and manufacturers is common in the retail cases, but is rare in the finance and insurance cases. The explanation for the difference is that the retail sector relies heavily on product information to ensure effective customer service. Finance and insurance enterprises use vendors occasionally eg to provide training on computer software packages. The products of the finance and insurance sector are usually generated by the enterprise itself and do not depend on a vendor.

The cases confirm that the quantification of industries' training demand will be a difficult process as enterprises appear to operate within unique sets of circumstances and therefore have quite different expectations of the training system.

Training expenditure

All enterprises studied were asked to estimate their training expenditure as a percentage of payroll. In the finance and insurance cases estimates varied from 1.4% to 5%. There was a range of from 1% to 4% in the retail cases. With the suspension of the Training Guarantee Act few enterprises keep complete and accurate records of training expenditure. Definitions of training expenditure vary widely - one enterprise with a relatively low level of training expenditure nevertheless claimed that it is the 'training ground' for the industry and close examination of its training activities indicates that several important activities are not costed. Taking into account these difficulties, it would seem pointless to try and draw any worthwhile conclusions about the relationship between size and training expenditure in the case studies.

Distribution of training

There is an uneven distribution of training resources within the case studies. Most of the enterprises devote a high proportion of their training resources to induction, customer service training and management development. In the finance and insurance cases a fourth type of training may be added—professional development. These areas reflect current corporate strategies as enterprises respond to and anticipate competitive pressures. Training for clerical and administrative staff, by contrast, is often ad hoc and this group tends to receive a low share of training resources.

The case study enterprises made little use of the vocational education and training (VET) sector for external training of their staff. There were some complaints that TAFE courses were too general to be relevant. Only one enterprise had established a close relationship with its local TAFE colleges for various types of training. In part the lack of extensive use of the VET sector could be attributed to the emphasis on non-technical behavioural skills in the service industries. The main forms of training in the retailing, and banking and insurance industries, evident in the case studies, are induction training, customer service skills training and management development. Apprenticeships are relatively uncommon in both sectors. They are used in those enterprises that require technical skills, such as motor mechanics and baking.

3. The Survey

The survey examined the following issues.

- Organisation characteristics:
Industry group (ANZSIC code); size of worksite and enterprise workforce; foreign or Australian ownership; single-site or multi-site; Australian-based or multi-national firm; breakdown of staff by employment status and occupation.
- Global, industry, enterprise and contextual factors:
Changes in range of work of employee groups; structural changes in organisation; changes in competition for products and services; extent of production for export markets; business planning in the organisation; accreditation and adoption of total quality management; major recent investment in technology, and changes in products and services; industrial awards and agreements; training provisions, if covered by enterprise agreements or industrial awards.
- Training activity:
Extent of training in the last year; employees involved in training; payroll expenditure on training; formal and informal training arrangements in the organisation; decision-making process involved in determining training needs; training infrastructure; training evaluation strategies; role of industry standards; whether worksite training is accredited; perceived factors driving training.

This chapter describes the main findings of the survey of industry training carried out by the project research team, with the field work conducted by AGB McNair.

3.1 Methodology

The sample

The sampling unit for this survey was worksite or location (as defined in *Profiles of Australian Businesses*, ABS Catalogue No. 1322.0). Government administration, education, and health and community services were regarded as out of the scope of this study.

The target national sample of 1,750 worksites was distributed by the research team across industry sectors as follows:

- 200 worksites in each of the five target industry groups - construction, machinery and equipment manufacturing, finance and insurance, food and beverage manufacturing - totalling 1000 worksites;
- 750 worksites across the other ANZSIC industry groups.

As stated above, the 'other industry' group excluded those industries with large public sector employment, including public administration and community services.

Within each of these industry sectors an equal number of interviews was sought from each of the following size categories:

- small worksites (less than 20 employees);
- medium worksites (20-49 employees);
- large worksites (50 or more employees).

Accordingly, the total sample (n = 1750) was first distributed proportionately across States/Territories. A stratified random sample of locations was drawn from each State using the industry sectors and size specifications as described above.

The sample was drawn from a comprehensive database of businesses in Australia compiled annually from Yellow Pages and supplemented with other business databases. A total of 1760 interviews was achieved. The break-up by industry sector and size is given below in Table 3.1. Further details of the sampling, including the breakdown of the sample (by ANZSIC three-digit code level, size, multi-national status and other characteristics) can be found in the appendices of the separate survey report (McIntyre et al., 1996).

Table 3.1
Sample: Industry sector and size

	Const'n	Mach equip	Finan & insur	Food & beverage	Retail trade	Other	Total
Small	68	67	125	119	73	26	714
Medium	67	67	38	39	67	24	525
Large	66	67	37	41	64	24	521
Total	201	201	200	199	204	75	1760

Note: Among the 750 worksites in the 'other industries' group, the largest numbers of worksites were in other manufacturing groups (26%), wholesale trade (13%), transport and storage (11%), property and business services (13%), personal and other services (10%).

Source: McIntyre, J. et al (1996) Enterprise Training in Australia: National Survey of Training.

Survey method

A fully structured questionnaire was used for the survey. The full questionnaire is included in Report Two (McIntyre, J. et al (1996) Enterprise Training in Australia: National Survey of Training.) and a summary of the questions can be found in Appendix 2 of this report. The survey topics covered:

- organisation characteristics eg industry, size of worksite;
- factors that may affect training eg new technology, quality initiatives, industrial relations;
- training activity.

A pilot of 30 interviews was conducted to assess interview length and check questionnaire wording and flow. For the full survey, interviews were conducted using the AGB McNair Computer Assisted Telephone Interviewing (CATI) system. Interviewing was conducted from AGB McNair's CATI offices located in Sydney, Melbourne, Brisbane, Adelaide and Perth. Interviewing was carried out in September/October 1995 and the average duration of each interview was 15 minutes.

Given the nature of the survey, the response and contact rate achieved were very satisfactory. There were some 2980 worksites contacted to obtain 1760 interviews. Some 967 contacted worksites refused to be interviewed; 159 were unable to be interviewed as the appropriate contact was away for the survey duration; and 94 interviews were terminated midway because the respondent refused to continue. Typically this was because they did not want to disclose information which they considered confidential or in some cases because they felt the interview was taking longer than expected.

Analysis of data

To provide a basis for the multivariate analysis, two sets of composite variables or indices were developed by the research team: 'Indices of training activity' and 'Factors associated with training activity'. These factors and the survey questions they are derived from are shown in Tables 3.2 and 3.3. The main method of multivariate analysis used was loglinear analysis. Loglinear analysis allows the simultaneous analysis of several independent variables and one dependent variable where some or all of the data collected is in categorical form (eg occupation or industry codes) rather than as continuous data (eg percentage of payroll spent on training). It is therefore particularly useful for multivariate analysis of training and enterprise variables. The report on the national survey provides more explanation of the data analysis and modelling approach.

Table 3.2
Indices of training activity: derived variables
(Key to numbers in Appendix 2)

Diversity of training	The variation in the types of training provided (D1, D2, D3, D4, D5).
Volume of training	The extent of training activity: proportion of employees receiving training in last year and proportion of payroll expended on training (D5, D11).
Training reform engagement	The extent to which training has been influenced by training reform (D10, D9, D1abc).
Reliance on external training	The extent to which training is conducted externally (D4, D1abc, D2 and D7cd, D3).
Formalisation	The degree to which training is formalised and regulated (D7, D8, D10) (informality, D2cd).
Individualisation	The individual's influence on training decisions: whether training is identified and negotiated by individuals (D6).

Table 3.3
Factors associated with training activity: derived variables
(Key to numbers in Appendix 2)

Nature of the industry	Industry sector (A1).
Size of worksite or enterprise	Number of employees (A5,A6).
Australian ownership	Australian or multi-national enterprise (B1).
Permanency of staff	The proportion of the workforce who are full-time permanent employees (B2a: high, medium and low groups).
Workforce professionalisation	The proportion of the workforce who are managers and professionals (B3a: High, medium and low groups).
Workplace change index	Change in the range of tasks performed (B4a-d) and number of structural changes in last 3 years (B5def).
New product or process technology	Major investment in last three years (C6) and whether new products or services have been developed (C7).
Competitiveness of environment	Change in level of competition for products in last three years (B6).
Industrial relations	Award coverage of worksite (C8), training provision in award, (C10).
Quality commitment index	Whether worksite is quality accredited (C4) and has adopted or is adopting TQM (C5).
Strategic value of training	C2 where value is 1.

3.2 Findings on the main worksite characteristics

This section describes some of the main features of the industry context and worksite characteristics revealed by the survey. The tables on which the summary is based may be found in the appendix to the report on the national survey.

The size of worksite and enterprises

The size of worksite and enterprise varied with industry. Whereas construction, retail and the other industry groups have roughly equal numbers of small, medium and large worksites; finance and insurance, and food and beverage manufacturing have three times as many small as medium or large

worksites in the survey (it was not possible to gain a large enough quota sample of the latter). This reflects the preponderance of bakeries in food manufacturing and the branch organisation of banking, which is more likely to be a multi-skilled organisation than other industry worksites. Finance again differs from other industries in having worksites that are not the head office of the enterprise. Half the sampled worksites were multi-site enterprises, and on average two-thirds of these worksites was the head office. Finance also has by far the greatest share of the very large organisations represented.

Permanency of the workforce

Industries differ in the permanency of their workforce, though overall levels of permanency are high. On average 81% of staff are permanent full-time and 8% permanent part-time, with the remaining 11% either contract or casual. Finance, and food and beverage manufacturing have the highest proportions of part-time permanent staff, and construction has the highest level of contract staff. Food and beverage manufacturing has the highest levels of casual staff. As a general rule, levels of permanent staff are lower (and other categories higher) in small worksites. The highest proportions of casual staff are employed in the smaller food and beverage manufacturing, and retail worksites.

Occupational structure

The survey asked worksites to state the proportions of staff in different occupation groups. The eight major ASCO categories were combined for the purposes of the telephone interview into four groups: Managerial and professional, technical and trades, clerical and sales, and labourers (which included plant operators). Table 3.4 shows that the different industry groups report a varied occupational composition. Manufacturing has a typically high proportion of trades and technical employees, and finance and retail more clerical and sales workers. The tables shows means for the industry and conceals differences due to size. The smaller worksites in general reported higher proportions of management and professionals, and the larger worksites, except those in finance and insurance, and retail trade, reported larger proportions of labourers.

Table 3.4
Workforce by proportions of occupation group (mean percentages)

	Construc	Mach equip	Finance & ins.	Food & bev.	Retail trade	Other
Management and professionals	28.0	19.1	37.8	24.9	25.5	28.1
Technical and trades	35.4	34.8	3.2	16.1	20.3	20.3
Clerical and sales	15.8	18.8	58.6	25.2	38.3	26.2
Labourers	20.8	27.2	0.4	33.7	15.9	25.4
Total	100.0	100.0	100.0	100.0	100.0	100.0

Source: McIntyre, J. et al (1996) Enterprise Training in Australia: National Survey of Training.

These differences are likely to be important since it is known that the managerial and professional occupations obtain the greatest share of workforce training.

Work re-organisation

The range of work for each of these occupational groups (Question B4) has changed over the last three years. In general terms, worksites report that the range of tasks had changed 'a lot' for less than 40% of managers, 25% of technical staff, 25% of clerical and sales staff and 16% of labourers. Again this was size-related: it was more likely for larger worksites to report that their labourers' work range had changed a lot. Finance and insurance worksites, in general, more often report 'a lot' of change for their management-professional and clerical-sales staff. Smaller worksites, conversely, are more likely to report the range of tasks has changed, a little, or not at all.

Structural changes

Related to workplace change is the extent to which a range of structural changes has occurred (or was occurring) on worksites (Question B5), since adaptation to organisational change was felt to be a driver of training. The most commonly reported form of structural change were 'more emphasis on internal staff communications' (70% of worksites) and 'introduction of team processes' (47%) and 'down-sizing, or reduction in overall staff numbers' (37%). These trends are more pronounced in larger worksites (for example, where 'team processes' are reported as a change by 65% of worksites). However, there appear to be few differences across industries in the relative importance of these changes. Both workplace change and structural changes are more commonly reported in multi-national enterprises, and this may be related to the fact that such companies are larger.

Competition and orientation to export markets

The level of competition for products and services (Question B6) is reported to have changed 'a lot' for nearly half of the worksites and 'a little' for a further quarter. This change in competition is reported across the board irrespective of the size, multi-site status, and Australian ownership of the respondents. However, it is slightly more pronounced for the finance and insurance employers, where nearly two thirds (64%) report competition has changed 'a lot'.

A further aspect of competition is the extent of production for export markets (Question B7). Nearly two-thirds of the worksites exported no products or services and less than 10% of all worksites reported more than a quarter of their products go to export. Machinery and equipment manufacturing stood out as the exception with two-thirds of these worksites reporting some level of export and 53% (compared to 26% overall) reporting at least a quarter of their products or services were exported. Large worksites were more likely to export.

The survey asked whether the worksites had a business plan and (if so) if it included a section on training (Questions C1 and C2). Three-quarters of worksites had a business plan, with large worksites almost twice as likely as small to report this. Among those with a plan (n=1303) a further three-quarters said they had a section on skill development and training, with finance and insurance having the highest level (86%) and retail trade the lowest (66%). Again the large and medium sized worksites, except in finance and insurance, were much more likely to report a training plan. This may reflect the fact that large organisations, who are more likely to have formalised training and training budgets, have to account for this in their business planning.

Industry regulation

Question C3 asked about the extent to which government regulation or licensing affects the worksite's market for sales and services. Regulation was reported to affect the market for nearly half the worksites, irrespective of industry. The sector with the largest proportion of worksites reporting this was finance and insurance (69%), with the smallest proportion in machinery and equipment manufacturing (42%). The size of the worksite seems to have some slight effect on perceived government regulation, though this is most pronounced in the food and beverage manufacturing worksites.

Quality commitment

Two questions were asked about quality assurance (Questions C4 and C5). More than half the worksites reported they were accredited (26%) or in the process of being accredited (26%) under ISO/AS quality standards, and this was notably more common in construction (39%) and machinery and equipment manufacturing (38%) than other industries. Accreditation was more likely in worksites that were multi-site and multi-national in ownership, and related to the size of the worksite with the exception of finance and insurance where size made no difference to accreditation. A third of worksites claim to have adopted Total Quality Management (TQM) and a further quarter (27%) to be in the process. Again, the adoption of TQM is more often reported with increasing size of worksite, and with a multi-site and multi-national organisation.

New technology: equipment and products

The impact of new process technology and new products was assessed (Questions C6 and C7). Major investment at the worksite in the last three years was reported uniformly across all industry groups by some two-thirds of worksites and predictably this was higher in the larger worksites, multi-site and multi-national companies, following the pattern in other questions. The introduction of 'new products and services in the last three years' was reported by a similar proportion (69%) of worksites, though slightly higher in food and beverage (79%) and finance and insurance (79%), slightly lower in construction (53%).

Change in production and process technology is an important driver of training. This response indicates a fairly high level of innovation across industries, with the effects somewhat more pronounced in larger worksites.

Awards and enterprise agreements

The flexibility of working conditions was assessed by asking respondents about whether they were governed by industrial awards or enterprise agreements or both (Question C8). Two thirds of the worksites were covered either by awards (40%) or agreements (20%) or both (20%) with less than a fifth covered by neither. Awards were highest in the food and beverage, and retail trade worksites (about 50% in each) and lowest in construction (32% of worksites).

A further question asked for information about the proportion of the workforce covered by an industrial award or enterprise agreement (Question C9). Some 40% of worksites reported 'all staff' were covered by either awards or agreements. Fewer than 15% of worksites had less than half the workforce covered by neither. Among the great majority of worksites covered by either awards or agreements (n=1420) about half reported that training provisions had been included in the award or agreement (Question C10).

3.3 *The character and extent of training*

The survey sought information from worksites about the character and the extent of training. Character is assessed by measures such as whether training was formal and regulated or informal, and whether it was conducted externally or on-site. Thus the survey asked about: (1) formal training such as apprenticeships, traineeships, labour market programs and placements; (2) support for external course attendance; (3) informal training on-site, including on-the-job training; and (4) informal courses provided by other organisations (Questions D1, D2, D3, D4). Character is also informed by the way decisions about training are made (D6), evaluation and needs analysis (D8) and the nature of training infrastructure (D7).

Extent of training refers to such measures as the proportion of employees involved in training in the last year (D5) and training expenditure as a percentage of staff payroll (D11).

Types of training provided by worksites

There are marked differences between industries as to whether training provided is formal or informal. Figure 3.1 shows the profiles for each industry group (data for other industries and for 'no training' is excluded). In the last year, nearly half the construction, and machinery and equipment manufacturing sites had apprentices, while finance and insurance had virtually none.

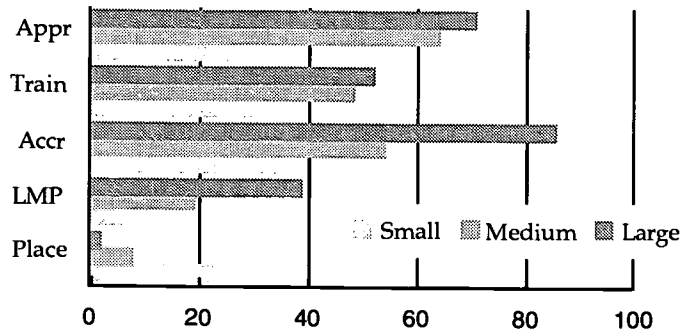
This reflects the strong tradition of apprenticeship training in manufacturing industries, though it is notable that food and beverage had more trainees than

apprentices. (Note that the chart does not reflect the relative numbers of apprentices and trainees in these industries, only the number of worksites having such trainees in the last year). Finance and insurance has a higher level of trainees and stands out overall as having a different profile.

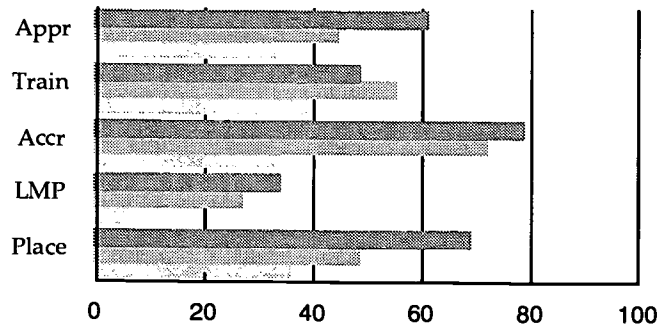
Overall this represents a high reported level of formal training activity. When broken down by size within industries, it is most apparent that the large and medium worksites generally have a much higher incidence of employees in formal training, and small worksites appear much less likely to have employees in formal training.

Figure 3.1
Percentage of worksites with formal training (by worksite size and industry)

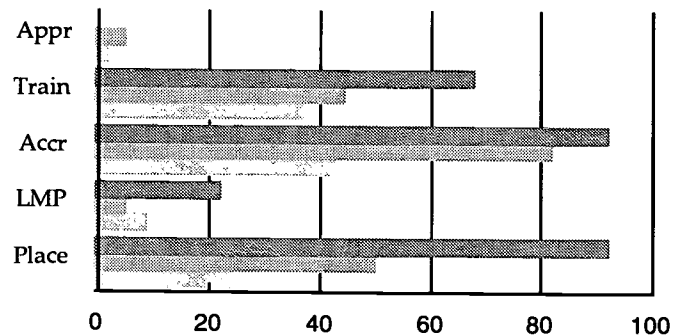
(a) Construction



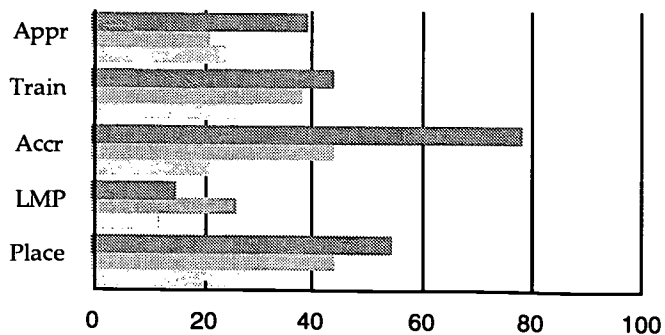
(b) Machinery & equipment manufacturing



(c) Finance & insurance



(d) Food & beverage manufacturing



(e) Retail trade

Key:

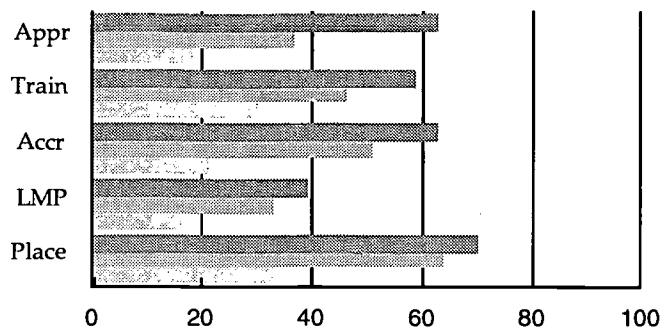
App r apprentices

Train trainee

Accr other accredited

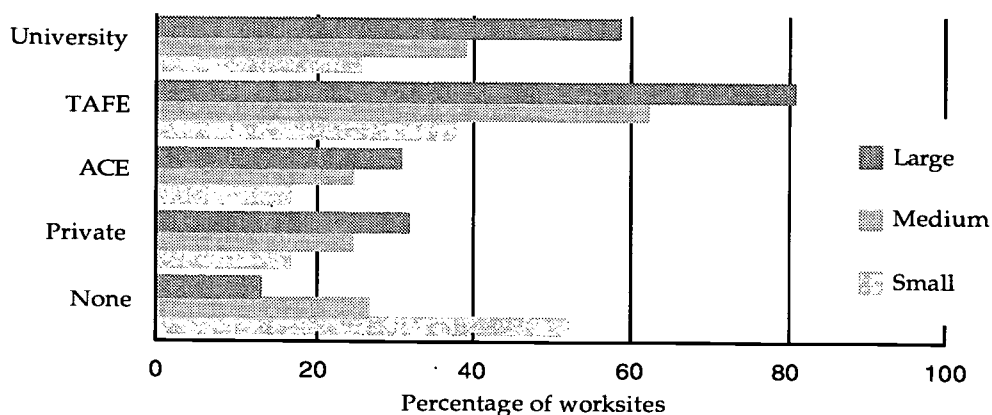
LMP labour market

Place work placement



The higher incidence of formal training in large organisations is reflected in the higher incidence of support in large worksites for external course attendance (Figure 3.2). TAFE generally dominates and this pattern is consistent across industries even at the level of ANZSIC industry groups. Generally speaking, two-thirds of all respondents reported support for at least one avenue of external course-taking. Nearly 60% of all worksites report they 'contribute to course fees or allow time for attendance' in TAFE and 40% for university study. Overall, a quarter (24%) of worksites use the adult and community education sector (ACE) and a quarter private colleges. Worksites may use more than one type. The data confirms the emerging role for ACE in providing training for small business (see McIntyre et al., 1995: 83). Finance and insurance had the highest levels of support for external courses.

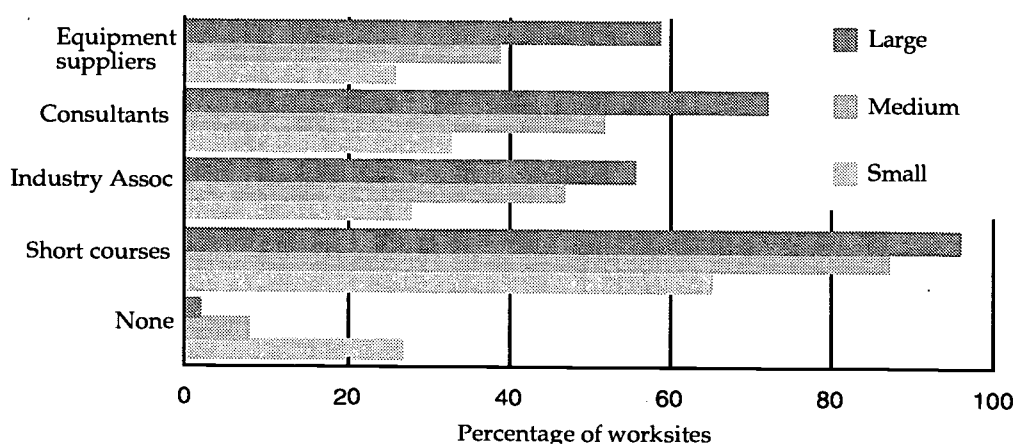
Figure 3.2
Support for external course attendance by worksite size



It is not surprising that most worksites said they provided informal training of some kind (Question D3), including on-the-job (91% of worksites), induction (72%), mentoring (65%) and in-house courses (54%). The small worksites had lower levels of such training, with 15% reporting no training at all. There were not marked differences among the industry groups.

The most common type of informal training provided by another organisation off-site (Figure 3.3) was sending staff to 'short courses, seminars, conferences and promotional functions' (81% of all worksites). Again, small worksites were much more likely to have used this kind of training than other types (over 60% of small worksites reporting this). There were clear industry differences, with nearly all small finance worksites (83%) but less than half of food and beverage manufacturing sites (47%) using short courses. When size is taken out of account, the industry differences disappear.

Figure 3.3
Training by other provider organised by the worksite



The extent of training

Each worksite was asked to estimate what proportion of employees was involved in training (Question D5). Some 13% said 'none at all' and thirty-three percent said more than three-quarters of the staff or 'absolutely everyone'. Table 3.5 collapses the levels of training into three categories—showing where none, less than half the workforce, and more than half the workforce was involved in training and the breakdown by worksite size.

Table 3.5
Proportion (%) of employees involved in training by industry and worksite size

	Construction			Machinery & equipment			Finance and insurance		
	S	M	L	S	M	L	S	M	L
None	31	7	0	18	5	2	12	0	0
< 50%	40	51	53	54	63	47	19	21	24
> 50%	29	41	47	28	32	51	69	80	76
Total	100	100	100	100	100	100	100	100	100

	Food and beverage			Retail trade			Other industries		
	S	M	L	S	M	L	S	M	L
None	39	18	5	38	4	3	26	6	3
< 50%	38	39	44	33	49	47	38	53	45
> 50%	23	44	52	29	46	50	36	42	53
Total	100	100	100	100	100	100	100	100	100

In general, levels of training increase dramatically with increase in size, and the differences among industries by size of worksite are marked. For most industries, more than half the worksites have less than half their employees in training. Thus finance is exceptional in having the highest levels of training—over two-thirds of the small worksites (such as small offices or branches) have over half the staff in training. Food and beverage manufacturing has the lowest levels of training.

Industry and size account for much of the variability in the extent of training. The only clear pattern apparent when responses to questions on the four types of training (variables D1, D2, D3 and D4) are cross-tabulated, is between support for external course attendance and formal training in the last year. Not surprisingly, those worksites reporting they had apprentices in the last year are, as a group, more likely to report TAFE course attendance and less likely to report university, the adult and community education sector or private provider training, than worksites who report they have trainees or supported attendance at other accredited courses, or had labour market program participants or work placements (see Report Two - McIntyre, J. et al. (1996) *Enterprise Training in Australia: National Survey of Training*, Table 7).

Expenditure on training parallels these trends for the effects of size and industry. Small worksites more frequently report spending less than 1% of their payroll on training. However, the differences between small, medium and large worksites tend to even out quickly over the 2% level. There is a larger than average component of worksites (14%) responding that they do not know, especially in the finance and insurance industry, and medium sized food and beverage manufacturers.

These trends for size and industry to influence training are, in general, highly consistent with earlier evidence on industry training, including the 1994 ABS *Employer Training Practices Survey*, and detailed reference to this point will be made throughout the discussion of the modelling in a later section of this chapter.

Training infrastructure and training practices

Conducting the interviews by telephone limited the amount of information about training practices that could be obtained. The survey question on 'strategies to ensure adequate training' tried to capture the nature of decision-making about training. Several types of decision-making were suggested to respondents. These can be arranged from ad hoc and informal to formal competency-based assessment as shown in Table 3.6.

It is notable that the small sites have more 'informal' strategies that approximate the average, but lower than average values for more 'formal' strategies such as competency based training (CBT). The large sites tend to have higher than average use of 'formal' strategies of supervisor nomination of course-taking and competency-based assessment (51% of large sites as opposed to 34% of small). With the exception of finance and insurance, and food and beverage manufacturing the industry groups have similar practices in regard to how decisions about training are made. Finance consistently reported higher than average levels of training activity.

Table 3.6
Modes of training decision-making (percentage of responses)

	Informal Formal				
Type	Employees nominate training from course list	Employees identify own needs and negotiate	Supervisors informally assess employees	Supervisors nominate who attends listed course	Structured, competency -based assessment
Mean (%)	25	62	82	51	42
Small sites	23	56	79	40	34
Medium	21	62	84	52	40
Large	32	69	84	61	51
Construction	26	68	79	50	37
Mach equip	21	62	82	50	43
Finance	42	68	86	61	54
Food & bev	19	51	83	43	33
Retail trade	22	58	85	54	40
Other	24	63	81	50	41

A further question (Question D9) explored the extent to which competency standards were guiding training. About a quarter (26%) were using national competency standards and slightly more (29%) enterprise standards. This figure seems lower than it might be, given the emphasis placed on competency-based training over at least the last decade. The proportion of worksites using standards is greatest where three-quarters or more of the employees are covered by awards or agreements—nearly three-quarters of these worksites. However, there are about twice as many such worksites not using standards (unpublished data). The larger the worksite, the greater will be participation in standards-based training. Some 18% of small worksites are using national competency standards, rising to one-third or more of medium and large worksites, with a similar pattern for enterprise standards. There was little variation across industries in the use of either standards. This finding reflects the general trend for small worksites to rely on less formal training arrangements.

Training infrastructure

The survey asked about formal training infrastructure (Question D7). Over a quarter (27%) of all sites had a human resources officer, a third (33%) had a training manager and nearly half (46%) had trainers or instructors. Some 40% had a training room and 40% had a training plan. A quarter of sites had none of these facilities, but this was more common in small sites (43%) than medium (25%) or large (11%) sites. Again, more finance and insurance sites reported they had these facilities, and fewer food and beverage sites. The largest finance and insurance sites reported high levels of this training infrastructure. In general, there were marked differences in the training infrastructure of the

small and larger sites, irrespective of industry, providing support for the proposition that infrastructure is a function of increasing size of the worksite (not merely the organisation). Thus less than 10% of construction, food and beverage, and retail trade had a human resources officer, whilst 86% of large finance sites said they did.

Another aspect related to infrastructure was whether the worksite was a registered training provider and this was explored by Question D10. On average some 12% were registered providers, with few small worksites (finance excepted) in this category, and rather more medium and large sites, including 20% of construction and 18% of retail trade sites.

Regarding the evaluation of training (Question D8), there were few differences among the industry groups, with the size of the worksite making a much larger difference to whether the worksite formally evaluated training, conducted systematic needs analysis, had a training committee or developed training manuals. 42% of small sites did none of these things, and this was a trend across the industry groups (with finance again the exception).

3.4 *Modelling of key relationships*

The previous section provides a descriptive account of the main variables of interest in the survey and suggests some of the key relationships and their association. However, statistical multivariate analysis (the simultaneous analysis of several variables) is needed to bring out the key relationships and provides a way of summing up the dynamics which are driving training.

Loglinear modelling is a statistical technique that can be used to depict in a summary the strongest relationships between the composite variables already referred to as the 'Indices of training activity' and the 'Factors associated with training activity' (Tables 3.2 and 3.3). Various combinations of the composite variables were tried to establish the best models for the data. The main effects for the models were then summarised and each model displayed in the schematic form shown in the rest of this section. In all, the key relationships are depicted in six main loglinear models, one for each of the six indices of training activity.

The analysis showed clearly that the variability of training activity measured by each of the 'Indices of training activity' (which are all highly correlated with each other) can be described using a combination of up to eight variables. The two most influential variables are industry and size, where size is treated both as a worksite and an enterprise measure. Because the main effects of the significant variables were clear, there was no need to look further for interaction effects among the factors.

The main trends may be summarised as follows.

- The simplest model that accounts satisfactorily for variability on the indices is one which combines industry and size. All subsequent models retain size because of the magnitude of its effect.

- A more complex model replaces industry with a combination of other variables. The best such model is consistently true across the indicators. It combines:

worksite size (S);
industry (I);
workplace change (W); and
strategic value of training (business plan with section on training) (V).

A even more complex model adds some 'second-ranking factors', the best of which replaces industry with four additional variables from among:

technology (T);
provision for training in awards (P);
award coverage (A); and
quality commitment (Q).

A final model which is still more complex would put industry back in, adding it to these factors, giving the most complex model possible within the limitations of computing and the sample size.

- A number of variables were not found to have significant effects in any model. These were:

Australian or multi-national ownership;
the permanency of employment of the workforce; and
the competitiveness of environment.

This may be because factors such as ownership and competitiveness are environmental factors and act indirectly through other factors to influence training (see next chapter on modelling of training).

Some considerations related to interpretation need to be stated before the loglinear models are described in more detail.

- The models describe only a maximum of five variables at a time, due to limits of computing and the sample size.
- When variables are referred to, their precise definition needs to be recalled. Some variables are composite. A label such as 'workplace change', for example, combines responses to survey questions on structural change and on change in the range of tasks performed by groups of staff.
- Two measures of size were employed in the analysis—worksite size and enterprise size. When enterprise size was substituted for worksite size in the analysis, there was little change in the nature of the models. Thus, only models including worksite size are described in detail with a comment as

to any variations which occur for models using enterprise size as a variable.

The following section describes six models which best account for variability on the indices of training previously described. In each case the model is diagrammed and the main relationships summarised. The diagram shows the dependent variables (boxed) with all those variables having some effect, and those with the largest effects circled. Excluded from the diagram are factors that have no effect at any time. An arrow is drawn to indicate the relationship between an independent variable and the dependent variable. The key relationships are summarised next to the diagram and expressed in relative terms, for example: 'The larger the worksite and the greater the degree of work re-organisation, the greater is the diversity of training on the worksite'.

Diversity of training

The index 'diversity of training' represents the extent to which the worksite was training across the range of possible training activities (Questions D1,D2,D3,D4,D5). It includes formal training such as apprenticeships, traineeships and work placements; support for external course attendance at educational institutions; and informal training both on-site (including staff development, mentoring and job-rotation) and off-site, (including short courses provided by equipment suppliers, consultants and industry associations). Diversity refers to how *comprehensive* training is, that is, the extent to which a range of different training activities occur on a worksite, as distinct from the sheer volume of training activity (the next model). Used in loglinear modelling, this index therefore provides a powerful measure of this dimension of training. Earlier research, such as the ABS training surveys, typically did not bring data about types of training together in this way.

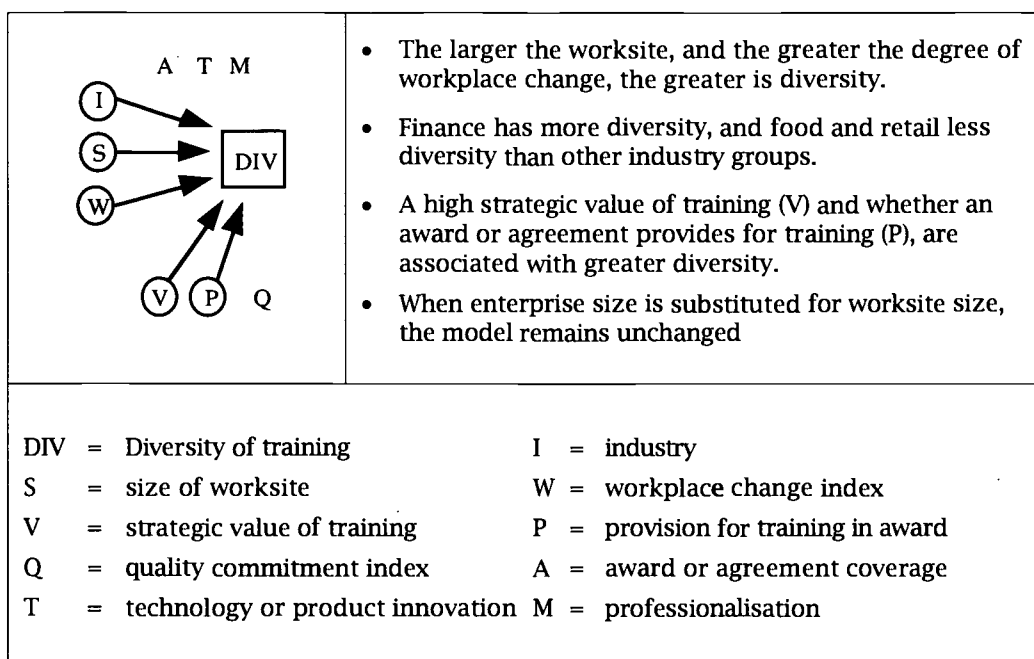
The best model explaining 'diversity of training' comprises five variables whose effects, in order of magnitude, are as follows: size; workplace change; industry; the strategic value of training; and provision for training in awards or agreements. The larger the worksite and the greater the degree of workplace change, the greater is the expression of diversity. Finance has more diversity; and food and beverage, and retail trade have less diversity than other industry groups. The higher the 'strategic value of training' (whether the business has a section on training in its business plan) and whether training provision is covered by an award or agreement are also associated with greater diversity.

The conclusions of the Phase One report played down the strategic significance of training in enterprises and regarded it as more an operational matter. This survey supports the view that training has a higher strategic value than was previously assumed. It may be that the degree to which a worksite's business plan provides for training translates into high values for diversity of training. The greater influence of 'work re-organisation' in this model suggests, however, that training is also an operational issue. It may be that both dynamics are at work in stimulating training.

It has already been mentioned that two measures of size were used in the modelling and that they produced similar results. When enterprise size was substituted for worksite size in the analysis of diversity, the model is very similar to that for worksite size, except that industry becomes somewhat less marked in its effect. Finance has medium levels of diversity; machinery and equipment manufacturing has higher levels; food and beverage, and retail trade have lower levels of diversity.

It seems that sheer worksite size leads to a greater differentiation of training activity. Yet the impetus is greatest where change in the workplace is most pronounced. Increasing size may also lead to a greater recourse to both formal and external training, as subsequent models show. This general trend is consistent with the findings regarding size of employers of the ABS *Employer Training Practices Survey* (1994: 21-22).

Figure 3.4
Diversity of training



Volume of training

If diversity of training refers to the range of types of training, the volume of training refers to sheer extent of training, or how much training is being done. The index combines survey responses for the proportion of staff who had training in the last year, and proportion of payroll expended. The best model shows (in order of importance) that volume of training is related most strongly to: type of industry; a high strategic value attached to training; a high level of worksite re-organisation; size of worksite; and quality commitment.

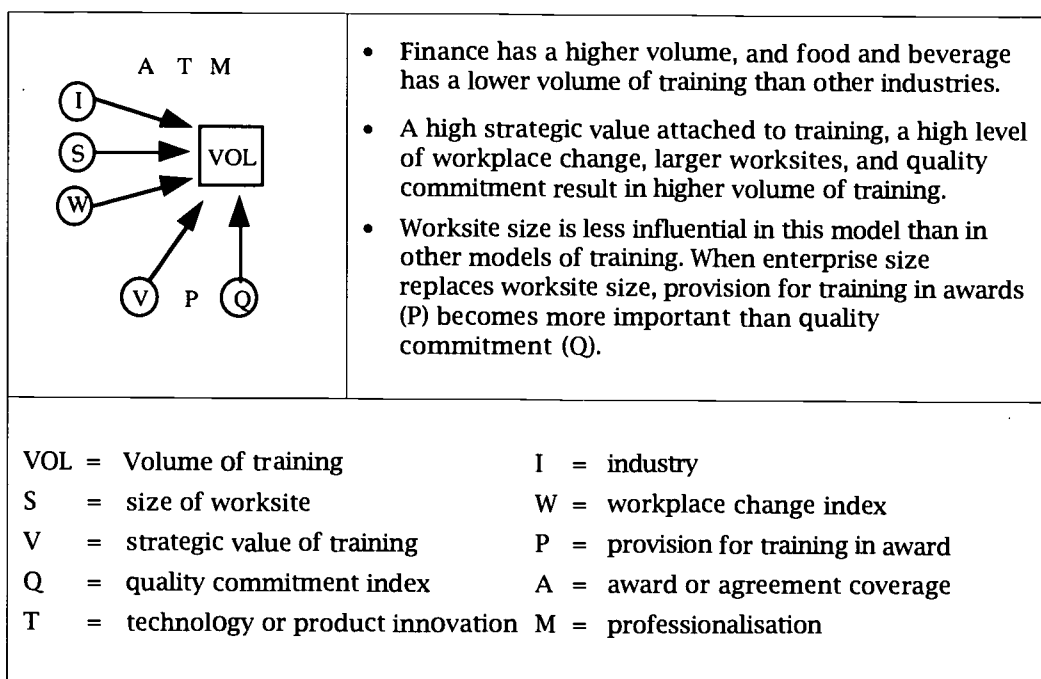
This model is exceptional among the six because size, while still important, has less effect on this factor than it does in other models (or indices of

training). The 'strategic value of training' refers to a simple measure, whether those sites with a business plan include in that plan a section on training.

Again, the pattern of relationships obtained with size defined as worksite size shows only minor changes when enterprise size is substituted. Size returns to its position as the most significant factor in the model and the magnitude of the effect of provision for training in awards and agreements (P) becomes greater than the effect for quality commitment (Q). Thus with enterprise size in the equation, size returns to its usual place as the dominant factor explaining training differences.

This throws the worksite size/volume of training model into sharper relief. At the worksite level, there seems to be a clear connection between formal training strategy, quality commitment and workplace change generating high training volume—size of worksite aside. At the enterprise level, when the modelling takes only the size of the enterprise into account the sheer organisational size and the force of awards or agreements requiring training throughout the organisation come more into play.

Figure 3.5
Volume of training



Training reform engagement

A third index of training is designed to capture engagement with training reform, particularly a commitment to accredited training. Training reform engagement is a composite measure of the extent to which worksite practices reflect developments such as competency-based training and the accreditation of providers and courses. It is assumed that greater engagement will be reflected in higher values for several variables—whether the enterprise conducts training based on competency standards (D9),

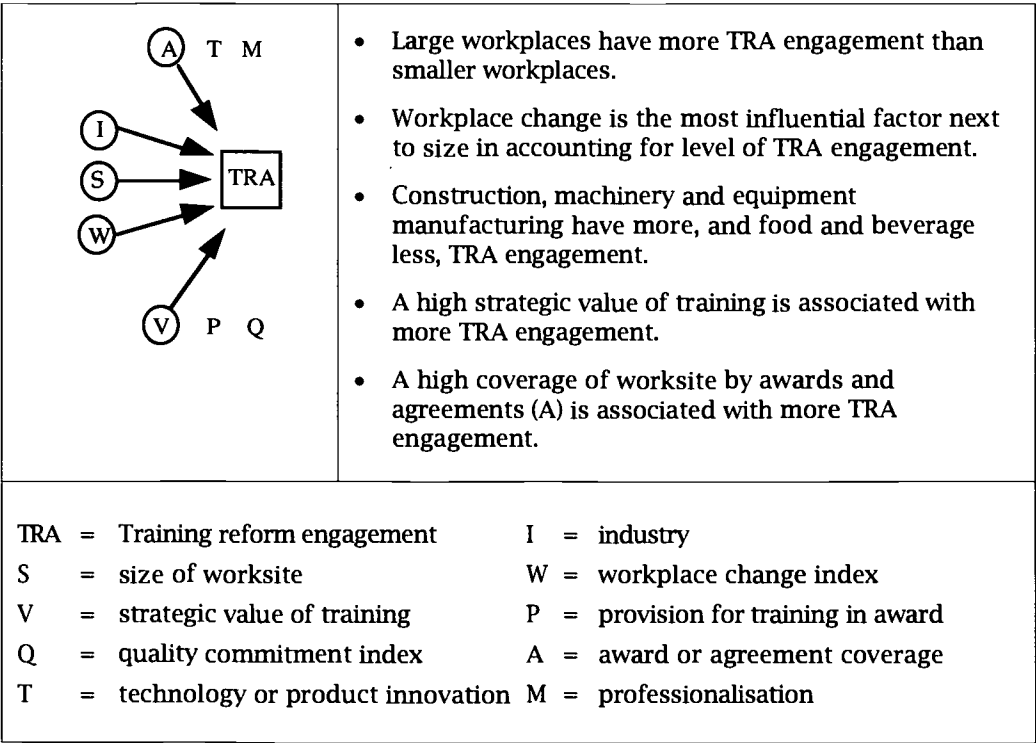
whether it is a registered training provider (D10), and the extent of training conducted through apprenticeship, traineeship and other accredited courses (D1abc).

The best model for TRA once again combines worksite size, workplace change, industry and the strategic value of training, and adds the extent to which the worksite is covered by awards or enterprise agreements (A), in that order. Workplace change is the most influential factor after size in accounting for level of training reform engagement.

Given the importance of award re-structuring in training reform it would be surprising if the extent of coverage of the worksite by awards and agreements were not influential. The earlier discussion noted that of the extensively ‘covered’ worksites there were only half the number training to national or enterprise standards compared to those that were not training to standards. Yet it is notable that the extent of workplace re-organisation is second only to workplace site in influence on training reform engagement, supporting the view that this factor is among the most powerful drivers of training.

When enterprise size is substituted for worksite size there is little change to the most acceptable model and this is in the area of industry where finance and insurance has significantly less engagement.

Figure 3.6
Training reform engagement



Reliance on external training

Reliance on external training is a complex measure of the extent to which training is conducted off-site through other sources besides the enterprise itself. It combines positive responses to questions on whether the worksite uses other organisations to provide training (D4), the extent of formal training (D1abc), whether the enterprise allows employees time to attend courses or contributes to course fees (D2) and negative responses to questions on training infrastructure (D7cd) and to informal training conducted on-site (D3).

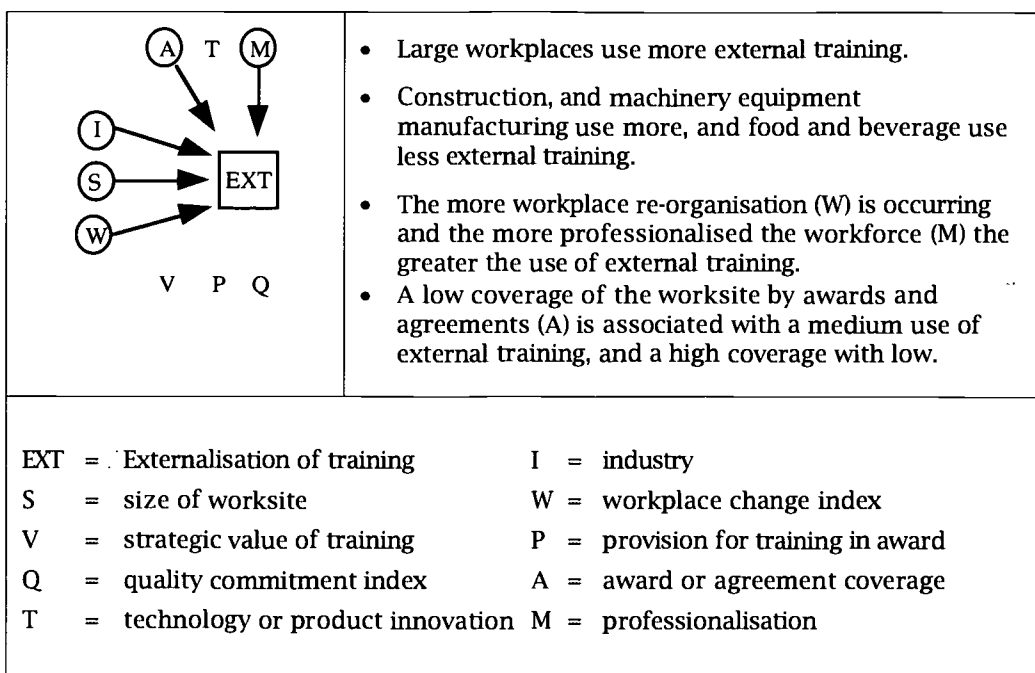
This model again has size, industry and workplace change as the first three dominant factors. However, the second-ranking factors this time are coverage of worksite by awards and agreements (A) and 'workforce professionalisation'—the proportion of the workforce who are managers and professionals (M). Again, larger worksites are more likely to rely on external training. The construction, and machinery and equipment manufacturing industries use more external training, food and beverage manufacturing uses less. The greater the degree of workplace re-organisation reported, and the more professionalised the workforce, the greater use there is of external training. When enterprise size is substituted for worksite size there is no change to the model.

A low coverage of the worksite by awards and agreements (A) is associated with a medium use of external training, and a high coverage with low levels. This finding appears to support the view that award-re-structuring is not a driver of *external* training.

Externalisation more than formalisation (the model next described) may reflect the importance of strong traditions of apprenticeship training in certain industries such as construction, and machinery and equipment manufacturing. The 1994 ABS employer survey found that the tradespersons had the highest training hours and paraprofessionals the highest training expenditure per employee (1994: 31) which may reflect the resource demands of external courses.

However, it is also interesting that 'workforce professionalisation' is an influential second-ranking factor in this model (one of two where it is so). This may reflect the trend for managers and professionals to have the greatest *participation* in industry training, and it may be that they tend to take that training off-site. *The 1993 National Survey of Training and Education Experience* found that the managerial, professional and paraprofessionals were markedly more likely than other occupation groups to have experienced training in the last year, and professionals more often attended an external course than other occupation groups (ABS, 1993: 2-4).

Figure 3.7
Reliance on external sources of training



Formalisation of training

Formalisation of training expresses the degree to which training is formal and regulated. Formalisation is a complex variable reflecting the worksite training facilities and resources (D7), whether training evaluation is conducted (D8) and whether the organisation is a registered training provider (D10). It also includes negative scores on informality - support for attendance at courses given by adult community education providers and private colleges (D2cd). The reason for including the last values is because a lack of established training infrastructure is likely to be associated with greater recourse to off-site short courses. The greater the development of on-site training, the less will be the expected use of short non-credit courses. The term 'informality' can otherwise be applied inappropriately to ACE and private colleges since both provide some accredited VET courses.

The best model for formalisation has *workplace change as the most influential factor, ahead of size and industry* in the magnitude of its effect. This is remarkable since size and industry have a dominant effect on virtually all indices of training. Work re-organisation combines values for change in the range of tasks performed by employees and for the number of structural changes experienced in recent years (such as the introduction of team processes or shedding of labour, see Question B5). It may be that the more comprehensive workplace change, the more likely that there will be an impetus to provide on-site training arrangements. It is important to note that this effect is independent of the size or the nature of the industry and its training arrangements.

The effect is consistent with the *ABS Survey of Employer Training Practices* (1994: 36) which found that employers who had significantly changed their

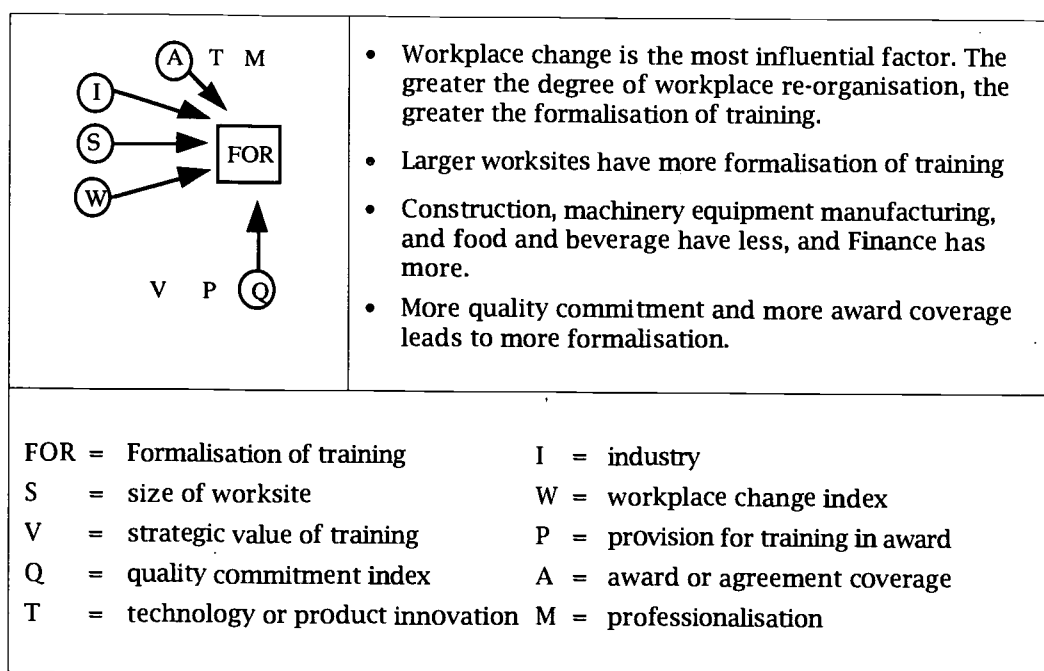
business operations (eg new work practices, organisational re-structuring, new products or services) were more likely to have provided formal training for employees (as well as increased their expenditure on training).

After size and industry, quality commitment (Q) and coverage of the worksite by awards (A) have an effect—higher levels leading to more formalisation of training. The effect of industry is for construction, machinery and equipment, and food and beverage manufacturing to have less formalisation, while finance has more.

Formalisation is one of the models where there is a strong effect of award coverage (the others are for training reform engagement and for externalisation of training). This is perhaps a surprising result, since it might be expected that construction and the two manufacturing groups, which generally have high levels of award coverage, might have higher levels of formalisation than they do in this model. However, this is only one factor and it is less significant than industry type, size and work re-organisation, and coverage by award or agreement itself is unlikely to stimulate the development of on-site training infrastructure.

When enterprise size is substituted for worksite size there is little change to the most acceptable model. Size becomes the dominant variable, a pattern seen with other models (DIV, VOL, IND), and in this case work re-organisation becomes less important.

Figure 3.8
Formalisation of training



Individualisation of training decisions

Question D6 gave a number of ways in which training needs are identified and training is arranged. This index of training is a simple measure of the extent

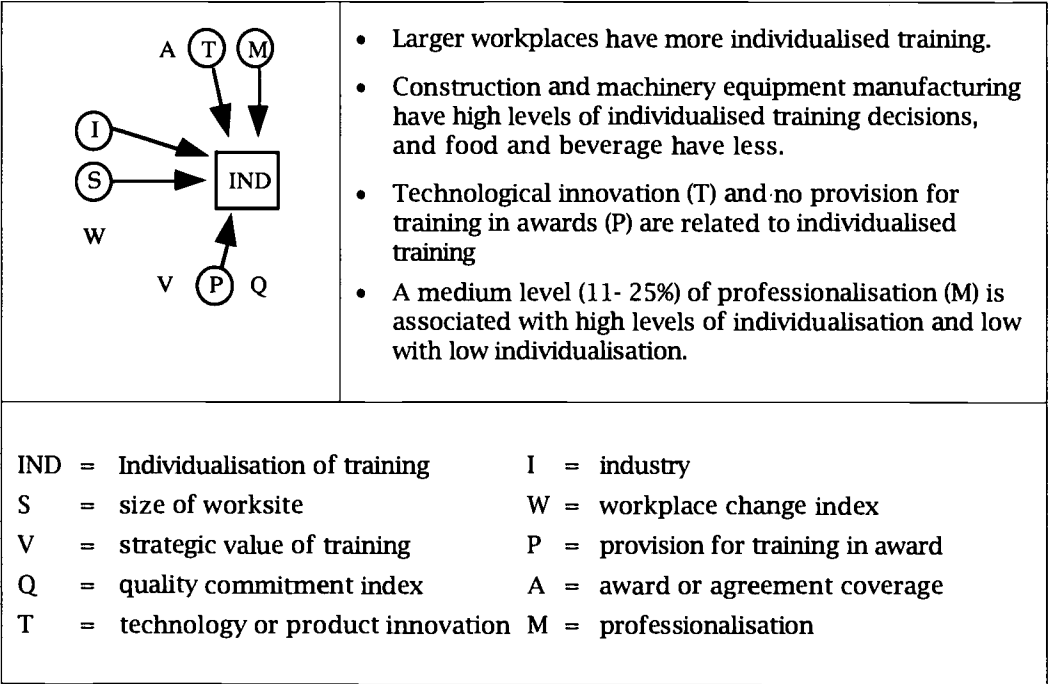
of the individual's influence on training decisions—whether training is identified and negotiated by individuals.

Besides industry and size, the best model for individualisation has as factors new technology and product innovation (T), workforce professionalisation, (M) and provision for training in awards (P), in that order. Technological innovation is associated with higher levels of individualised training decisions, perhaps because training needs due to new technology are highly specialised and best catered for through individual arrangements, eg through courses with equipment suppliers. No provision for training in an award or agreement is related to individualised training decisions. Such provisions are obviously likely to commit worksites to provide more formalised approaches to training.

This is again consistent with the ABS survey findings that show that professionals and managers have the greatest number of occasions of training (and thus access to training, as distinct from time taken up) discussed above in relation to the model for externalisation of training.

The models for IND are slightly different from all other models in not including work re-organisation (W) as an explanatory variable and including new technology or product innovation (T) as an important influence. This is consistent with the model for formalisation. In other words, individualisation is in a sense the antithesis of a regulated and formalised training environment. It would be unusual if comprehensive workplace change also figured prominently in explaining more individualised training arrangements.

Figure 3.9
Individualisation of training decisions



3.5 Perceptions of the drivers of training

Questions D12 and D13 asked respondents directly about their perceptions of the drivers of training for employees at their worksite. Table 3.7 gives the results from question D12 on the drivers of training. It is interesting to compare these perceptions with the factors which are statistically shown to be associated with training, as identified in the previous analysis. This comparison is discussed in the next chapter on modelling of training.

The survey respondents universally cited a 'concern for quality' (95% of respondents saw this as an important driver) with some 64% selecting it as the most important driver. Similarly 'new or changed technology' was cited by three-quarters (77%) of worksites, irrespective of size or industry and it must therefore rank as a near-universal concern. Far fewer (some 14%) saw it as the most important driver. Two-thirds stated that 'government licensing and regulation' was an important factor driving training (12% stated it was the most important).

The importance of award coverage and provision for training in awards as 'second-ranking factors' in the modelling accords with the perception reported to the survey. 'Industrial relations' in its own right was seen by 44% of respondents as important (3% as most important). Yet workplace change was seen as important by some 56% and fewer than 3% saw it as most important, yet it is this factor that ranks with size and industry as the chief driver of training in the model.

Table 3.7
Perceptions of important factors driving training (percentages)

Factor	Very important	Somewhat important	Not important	Don't know
Concern for quality	85	10	4	1
New or changed technology	54	23	23	1
Change in work organisation	26	29	43	2
Government licensing and regulation and OHS	48	22	29	1
Deregulation of markets	14	14	69	4
Industrial relations developments	21	23	54	1

Note: Cells show percentages, worksites with training only (n=1524).

3.6 Overview of survey results

The main findings in summary

- Training is related strongly to the nature of the industry and to the size of the worksite and enterprise.
- The main drivers of training, in order of importance, are:
 - workplace change;
 - provision for training in award or agreement;

coverage of employees by industrial award;
inclusion of training section in business plan;
the proportion of managers and professionals in the workforce;
commitment to quality management;
new technology and product innovation.

- Formal training is much more likely to occur in large rather than small organisations.

The modelling confirms that type of industry and worksite or enterprise size have a universal influence on the character and extent of training. Their influence is strong enough to account for much of the variability of training. This conclusion agrees with a general trend in the major ABS *Survey of Employer Training Practices*, where industry groups consistently differ in the reasons they give for training, the methods used to determine training needs, the factors which stimulated training expenditure, the extent of in-house training and infrastructure and so on (ABS, 1994: 6-24). The ubiquitous effect of size on the provision of training is consistent with a similar trend found in the ABS *Employer Training Practices Survey* (1994: 27-29).

These factors aside, the preponderance of workplace change (W) combining measures of change in the range of work done and structural change in the organisation is significant, since it is present in most models. Similarly, the strategic value of training (V) is associated with the first three models which deal with the diversity, volume and regulation of training. It could be suggested that this influence is linked to the perception of workplace change. This interpretation is consistent with the view, discounted in the Phase One research, that training is a strategic activity for the worksite.

The focus of the last three models is on the externality and formalisation of training, and it is interesting that the 'second-ranking' factors of coverage of the worksite by award or agreement (A), technology innovation (T), and the extent of professionalisation of the workforce (M) come more into play. Their appearance in the models after industry and size indicate they are drivers of training.

4. Modelling Training

The model of enterprise training described in this chapter has been derived from research conducted in the Phase One and Phase Two projects. It evolved through a cyclic process of heuristic research, development, testing and refinement. This involved 42 case studies of enterprises across 5 industries in Australia and a national survey of training in 1760 worksites across all industries in Australia. The Phase One case studies allowed the formulation and development of a tentative model of enterprise training. The Phase Two case studies and survey allowed testing and refinement of key aspects of the model.

4.1 *Development of a general model of enterprise training*

The Phase One case studies, involving 30 enterprises in 3 industries, enabled the development of a tentative model which was described in the project report. The Phase One research report reviewed the literature on models of training (Smith et al., 1995). Since the 1980s a number of models have been developed to attempt to account for the way in which training is carried out at the enterprise level. Of all the models reviewed, the Phase One research was informed most by the Warwick model of training in enterprises. The Warwick model has two sets of factors that affect the provision of training (Hendry & Pettigrew, 1989):

- factors that set training in progress (triggers);
- factors that establish training within the enterprise (stabilisers).

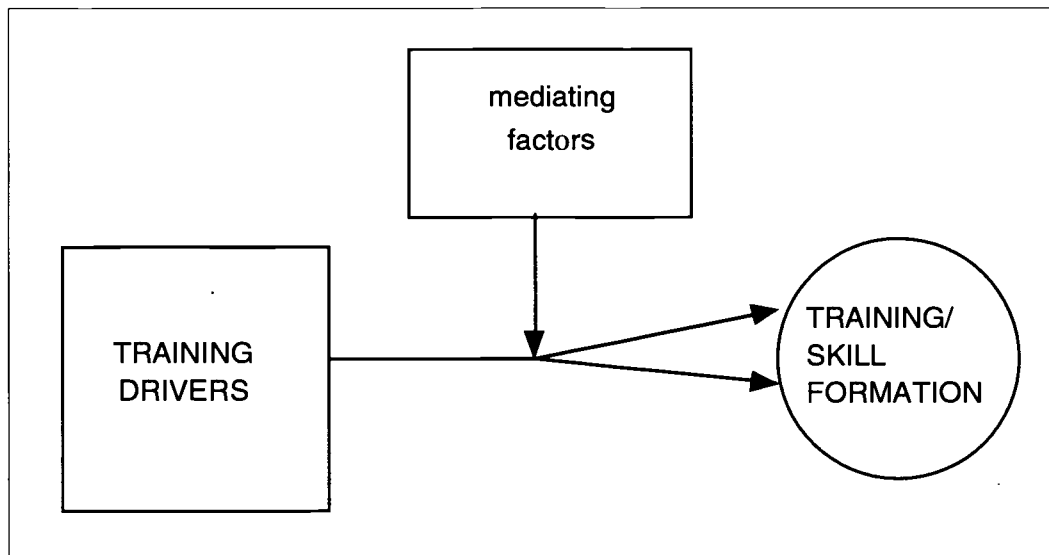
Analysis of the information from the 30 case studies led to the identification of several triggers of training in the enterprise which were termed 'training impetus factors' in the Phase One study and termed 'training drivers' in this study. Initially the research team explored the links between these impetus factors and training. The starting point was a simple model in which training in the enterprise is mainly dependent on 'training impetus factors' in the enterprise. The case study researchers found that in every case staff within the enterprise were able to nominate at least one factor which triggered training in the enterprise.

When these factors were compared across the 30 cases in the 3 industry sectors, it was found that many of the factors were common across several enterprises and a few were unique to the enterprise. Some factors appeared to be closely related to the particular industry sector. Thus a refinement in the Phase One model was to divide impetus factors into three types:

- global;
- industry related;
- enterprise specific.

Although some impetus factors occurred repeatedly across enterprises, there was great diversity in the training practices, even for enterprises in the same industry with a similar set of training impetus factors. Large enterprises reputedly spent much more on training than small enterprises, although on closer scrutiny the small enterprises tended to respond to training impetus with informal training activities. The diversity in training across the 30 enterprises was attributed to several mediating factors within the enterprise, mainly pertaining to size of organisation and training infrastructure in the organisation. This element has been added to the developing model of enterprise training, shown in Figure 4.1.

Figure 4.1
A model of enterprise training, arising from the Phase One research



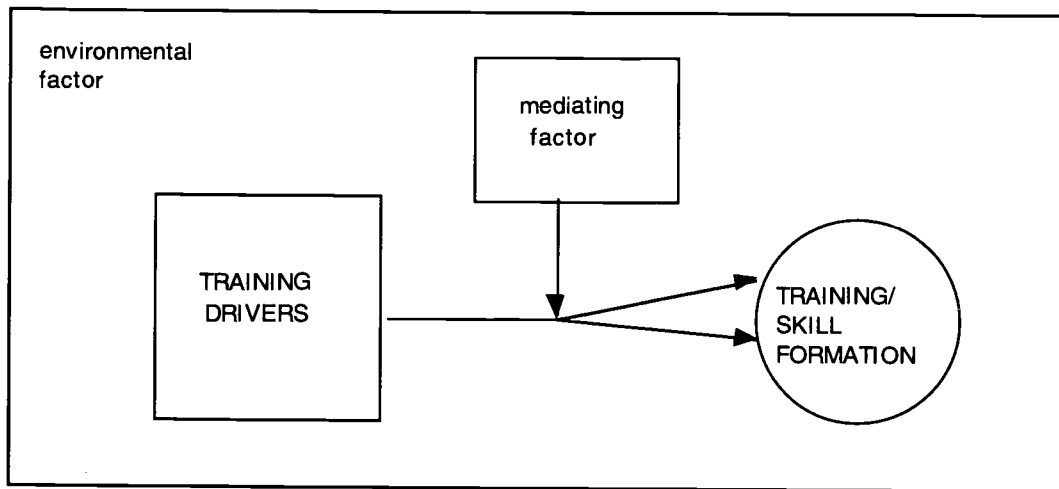
The mediating factors filter or moderate the effect of the training impetus, influencing the nature and extent of training activity. Mediating factors reported from the Phase One research relate to the structure and culture of the organisation, and include (Smith et al., 1995: 93):

- training infrastructure (training specialists and facilities);
- level within organisation of training decision-making;
- use of systematic approaches to training;
- use of competency standards;
- role of the individual in determining training.

So far all the factors in the model have been parameters of the enterprise—factors external to the enterprise have not been considered. Clearly some factors outside the enterprise can impact either directly on training decisions of the enterprise or indirectly on the impetus to train. Such factors are termed

environmental factors, emphasising that they are outside of the organisation but may permeate training decision-making within the organisation. This element is included in the fully developed general model, shown in Figure 4.2. In the Phase One research report, competitive pressure was included in the model instead of the broader concept of environmental factors.

Figure 4.2
The general model of enterprise training



The general model of enterprise training has four main elements:

- training drivers;
- environmental factors;
- mediating factors;
- training.

In the Phase One research only one environmental factor—competitive pressure—was identified. The mediating factors were termed ‘training structure variables’. The Phase Two research uses a slightly broader concept of ‘mediating factors’ of the enterprise, as defined below. Figure 4.2 illustrates the general relationship between the four main elements in the model. Each of the main elements of the general model and some key relationships will now be described.

Training drivers are factors within the enterprise which trigger training activity, and are perceived by those within the enterprise as the reason for training activity in one or more of its various forms. Several training drivers were clearly identified in the Phase One and Phase Two case studies. Examples of training drivers include quality initiatives, the focus of customer service, workplace change, and the inclusion of training in the enterprise's business plan.

Environmental factors are factors in the enterprise's business environment which impact on the enterprise and tend to generate one or more training drivers. These include the level of competitive pressure experienced by the enterprise and the impact of government policy such as deregulation of product markets, legislative requirements for occupational health and safety as well as training policy. The business environment has an effect on the extent to which enterprises provide training for employees *but the impact is indirect*. That is, environmental factors do not produce training outcomes in themselves, but produce responses in enterprises that in turn drive training. Thus the deregulation of the finance industry forced the banks into a more competitive environment. Part of the response of banks to this environment has been to place a very high premium on customer service to generate increased customer loyalty. As a result, the need for improved customer service has been a major driver for training in banks. The most common response to increased competition amongst the case study enterprises was the adoption of quality assurance processes. This became a very important driver for training in many of the companies in the study.

Mediating factors are factors within the enterprise which intervene between the training drivers and the training activity of the enterprise. Mediating factors do not drive training directly but govern the way in which the training drivers produce a particular set of training arrangements. For example, enterprise size is a mediating variable. When comparing small and large organisations having the same set of training drivers, small enterprises tend to engage in informal types of training; large enterprises tend to engage in formal forms of training. Another mediator is the level of training decision-making. Senior managers are more likely to commit resources to long term investments in training. However, the implementation of the training rests on the actions and attitudes of lower level managers in the enterprise who may not be quite so committed to training. The actual training arrangements that are put in place will depend on the role of managers at all levels of the enterprise. An influential mediating factor is industry, a classification which is based on the main activity of the enterprise. The mediating factors of organisation size, industry, and occupational structure are discussed in section 4.4.

Training is used in the model to include a wide range of activities, planned and unplanned, that may develop the skills of people in the enterprise. A key distinction made in the survey is between formal and informal training. For the purposes of this research formal training included accredited training such as apprenticeships, traineeships and other forms of non-accredited training such as labour market programs and student placements. Formal training also included the use of external training such as university or TAFE courses, adult education and private provision of external training courses. Informal training referred essentially to training arranged internally within the enterprise such as on-the-job training, induction, job rotation and mentoring. Informal training also included training provided within the enterprise by external providers such as consultants and equipment vendors. This distinction differs somewhat from the conventional definitions of formal and informal training that emphasise the differences between on- and off-the-job training delivery. Several variables are needed to adequately describe the multi-faceted nature

and extent of enterprise training activity. In the model, training is dependent on the training drivers and mediating factors, and indirectly dependent on environmental factors.

Thus the operation of the model is relatively simple. The enterprise exists in a business environment. The pressures that the enterprise experiences from the environment result in a response that may act as a driver for training provision within the enterprise. However, the actual training that takes place also strongly depends on the effect of intervening mediators. The interaction of environment, drivers and mediators is unique to each, individual enterprise and is the reason for the great diversity of training activities that are observed in Australian enterprises.

4.2 *Testing the general model of training*

The general model of enterprise training defines three types of factors in the enterprise and its environment which affect training. There are two broad tests of this model. Firstly, that the three defined categories of enterprise variable reasonably cover all the important factors observed to affect enterprise training. Secondly, that the relationships between the variables predicted by the model are observed in enterprises across all industries.

It is important to note that a crucial aspect of the model, the division of factors affecting training into 'training drivers' and 'mediating factors', arose initially from qualitative research in Phase One and was supported by the results of the Phase Two qualitative research. However, there was no direct test of this division in the survey research. The analysis of the survey data was only able to identify the strength of association of the various enterprise factors and their interactions with the training variables, and was not able to discriminate training drivers from mediating factors. Thus the division of factors into training drivers, mediating factors and environmental factors is based on judgements with respect to the definitions of each category. These definitions and the concept of this classification is grounded in the qualitative research.

While the survey research could not directly distinguish training drivers from mediating factors, it does support the predicted relationships of the model. The survey research enabled a test of the link between enterprise factors and training directly, rather than perceptions of those links which is at the heart of much of the case study research. As described in Chapter 3, the relationship between some of the enterprise factors and training is strong, and collectively accounts for much of the variation in the nature and extent of enterprise training. It also enabled determination of the relative strength of association between enterprise factors and training variables, and this is discussed later in this chapter.

The three components of the research - the Phase One case studies, the Phase Two case studies, and the Phase Two national training survey - collectively covered the important factors affecting training (42 enterprises were studied in depth and a further 1760 enterprises were surveyed). The

researchers found that all the important factors affecting training could be comfortably classified into one of the four categories of the model. Table 4.1 lists the factors affecting training that were identified in each of the three components of the research. The division of the listed factors into the four categories is based on the definitions in the general model of training, as described earlier.

The following section includes a discussion of some of the most influential and interesting factors affecting training, as identified in the three components of the research. Those factors which are not discussed in the next section are covered in earlier reports of the Phase One and Phase Two research.

Table 4.1
Factors identified in each component of the research

ELEMENT OF MODEL	Factors identified in case studies, Phase One: Construction, Electronics m/f, Food processing	Factors identified in case studies, Phase Two: Finance & Insurance, Retailing	Factors identified in national survey: All industries
DRIVERS	work re-organisation* new technology quality award re-structuring	workplace change new technology customer focus performance appraisal	workplace change technology/ innovation quality management industrial award coverage training in industrial award business plan with training component
ENVIRONMENTAL FACTORS	competitive pressure	competitive pressure deregulation	competitive pressure
MEDIATING FACTORS	organisation size training infrastructure level of training decision-making	organisation size training infrastructure senior management commitment to training	enterprise size worksite size industry occupational structure: proportion of managers and professionals
TRAINING VARIABLES	training expenditure balance of on-site/ off-site balance of formal/ informal balance of technical skills to non-technical skills training generic skills training vendor training distribution of training among occupational groups	[same as for Phase One study]	training volume training diversity Training Reform Agenda engagement reliance on external training formalisation of training degree of individual choice

* NOTE: Instead of work re-organisation, the broader concept of workplace change was measured in the Phase Two research.

Workplace change

Workplace change is defined as significant change in the way work is organised at the worksite, resulting in change in the work of many or all of the workers at the worksite. In the survey there were several questions covering aspects of workplace change. The index of workplace change is derived from the survey question responses on changes to the range of tasks performed, reduction of management layers, decentralisation of decision-making, introduction of team processes and more emphasis on internal staff communications. It is therefore a broader concept than work re-organisation which emerged as a training driver in the Phase One case studies.

Workplace change consistently emerged as a driver of training in enterprises across all the industries studied. In the Phase One case studies the work re-organisation aspect of workplace change was clearly an important driver of training in the three industries studied—construction, electronics manufacture and food processing. This factor also emerged as an important driver of training in the Phase Two case studies covering the retail, and finance and insurance industries. In the national survey of enterprises in all industries, workplace change was moderately to strongly related to training in the loglinear multivariate modelling for all training indices except training individualisation. High levels of workplace change are associated with high levels of training volume and training diversity.

The extent and pace of workplace change varied between industries and between enterprises within industries. This also affected the type of training provision that was made to support the introduction of change processes. Thus in the food processing industry in Phase One, the industry had adopted a national process for improving training provisions for shop floor employees based on industry competency standards in the Certificate of Food Processing. The training in the certificate is predicated on the move towards greater teamwork in the workplace and hence the importance of generic, behavioural skills training in the curriculum. In other industries training for workplace change was addressed at the enterprise level. Myer Grace Brothers were using training to reinforce and implement the move towards autonomous teams on the shop floor. In the banking industry, St George Bank viewed training as an essential underpinning for the transformation of the old building society culture into that of a retail bank.

The relationship between work re-organisation (rather than workplace change) and training was also explored directly in the survey. Change in work organisation was seen as important in driving training in 56% of all worksites where staff were involved in some form of training in the past twelve months. There was little variation in this percentage across the industries surveyed.

These findings are consistent with previous research in Australia and overseas. Change to work organisation has been clearly linked to the provision of training in enterprises by many writers (OECD/CERI, 1988; Ford,

1989; Adler, 1992; Brown, Reich and Stern, 1993; Osterman, 1995). In most of these cases new forms of work organisation are regarded as the trigger for greater training provision on the part of enterprises, particularly for training that emphasises the generic skills involved in teamwork and so on.

New technology and product innovation

New technology in the survey includes new process technology involving new plant, equipment or facilities introduced in the past three years at the worksite. Product innovation includes the introduction of new product, materials or services in the past three years. The index of new technology and product innovation was derived from responses to each of these components in the survey.

New technology and product innovation emerged as a driver of training in the case study enterprises in the Phase One and Phase Two research across the five industries studied. In the national survey, technology was only weakly associated with one of the indices of training—individualisation, and very weakly associated with the other training indices. This provides an interesting contrast with workplace change, which was closely associated with all training indices except individualisation.

When asked directly about the factors driving training, new or changed technology was seen as important by 77% of the worksites where staff received some form of training. This clear relationship, apparent also in the case studies, seems to contradict the non-existent or weak association with training indices as analysed in the survey. However, information from the Phase One and Phase Two case studies research provides an explanation for this. Product innovation is usually introduced into an existing production or service provision framework. The training implications are usually relatively routine, often only requiring a small amount of on-the-job training.

The case studies have shown, especially in Phase One, that new process technology, although sometimes requiring fundamental changes to the way work is carried out, in most cases involved training that was supplied by the vendor of the new equipment. The vendor would train key personnel (often a mix of engineers and shopfloor employees) who would then, in turn, be responsible for the training of other staff involved in the new process. The training itself would be simple, emphasising practical operational aspects of the new equipment. The overall result is that while some form of training is usually associated with new technology and product innovation, direct training expenditure is usually fairly low, with training limited to vendor training and on-the-job training. The conclusion from the research is that new technology is an important driver of training but only for certain types of training. Its impact on training is greater when it is associated with significant changes to work organisation.

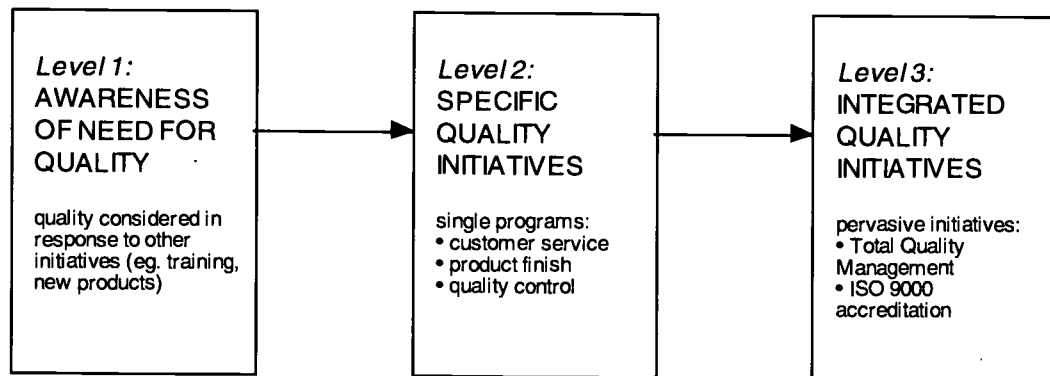
In numerous other studies technology is regularly cited as a key driver for the provision of training in enterprises (OECD/CERI, 1986; Ford, 1989; Adler, 1992). Investment in new process or new product technologies often creates

an urgent need for training, particularly at the shop floor level. Some studies showed how new technology also works in conjunction with new forms of work organisation, as new technologies almost always involve some change to the way work is performed.

Quality

It was found from the case studies across the five industries that quality has different meanings in different industries, and the approach varies greatly across enterprises. Apparent contradictions between the case studies and survey results can be attributed to the problem of interpretation of quality. It is useful to distinguish three 'levels' of quality initiative in enterprises. These are shown in Figure 4.3, with the lowest level on the left and the highest level on the right.

Figure 4.3
The three levels of quality within enterprises



Concern for quality clearly emerged as one of the most important drivers of training in the Phase One case studies for the construction, electronics manufacture and food processing industries. Many enterprises were undergoing level 3 quality initiatives and most of the remainder, particularly in the construction industry, were at level 2. In the Phase Two case studies 'customer service' (level 2) emerged as an important driver of training in all the enterprises sampled in the retail, and finance and insurance industries; but quality assurance and other level 3 quality initiatives were not pursued in most of the enterprises. This reflects the approach to quality which is common in the service industries where staff usually deal directly with the end user/customer.

In the national training survey quality was only weakly associated with formalisation of training (when both enterprise size and worksite size were included in the multivariate loglinear models) and volume of training (when worksite size was included in the multivariate model). For other indices of training, quality did not contribute to the models. This result contrasts with the case studies. It also contrasts with the direct question on training drivers in the survey, with 95% of those worksites which have some form of employee training viewing 'concern for quality' as an important driver of training.

These apparent contradictions may be explained by the particular index of quality management used in the analysis of the survey data. The quality index was derived from questions on the introduction of Total Quality Management and a question on accreditation under ISO or Australian standards. Clearly this index relates to level 3 quality initiatives, whereas the broader meanings of 'concern for quality' used in the case studies and one of the survey questions could relate to all three levels of quality initiative. However, as in the case of new technology, the concern for quality may not lead to a very high level of training expenditure nor a great diversity of training type. Training for quality is often focused on shop floor employees and delivered on-the-job. This makes the training relatively short, sharp and cheap for enterprises—one reason why it is so popular with managers who perceive a high, potential return from relatively modest training outlay. Although training for quality is a universal driver for training, it will often have only a limited effect on the level of overall training provision in the enterprise.

Corporate strategy

The relationship between corporate strategy and training was explored in the Phase One and Phase Two case studies but only indirectly in the survey through a single question on whether training provisions were in the enterprise's business plan. The Warwick model, in particular, identified corporate strategy as an important element in the training equation at the enterprise level (Hendry, 1991). In this model, enterprises respond to the competitive environment through the rational process of strategy formulation. This process may lead to the identification of a skills gap as the enterprise decides to introduce new products or enter new markets. The skills gap is the mainspring for the training provision in the Warwick model.

The results from the case studies and the survey shed an interesting light on this supposed relationship and show that strategy, where it exists, has a much more complex relationship with training provision than the direct rationality of the Warwick model suggests. The survey shows that three quarters of respondents claim to have a business plan and that a further 75 per cent of these respondents claim that the business plan contains a section on skill development and training. The loglinear modelling shows that the existence of training provisions in the business plan is well correlated with both high diversity and volume of training.

The case studies, however, tend to highlight a more complex situation. Thus many of the case study enterprises did not possess a recognisable strategy except in a loose, emergent way as a series of actions taken over a period of time in response to the market conditions. This was particularly true for enterprises that had not traditionally faced a truly competitive market. For these enterprises, the threat of deregulation was focusing management thinking on strategy in a hitherto unfamiliar way. For those enterprises that had traditionally existed in a more competitive environment, such as the larger retail enterprises and the newer financial institutions in particular, there was much greater evidence of clear strategies for the business. In these cases, training often played a key role as an enabler of strategy. However, in neither case was training regarded as a strategic issue in itself. Rather

training was required to help implement strategy which might contain some key human resources indicators. It was highly unusual to find training referred to in strategic terms by managers.

These rather contradictory positions may be reconciled by viewing business planning and strategy making as separate activities. Many enterprises will have business plans that guide the direction of the business in the short to medium term. However, long term strategy making is a quite different process. It is quite possible for enterprises to have business plans that include an element for expenditure on training. This is an operational matter, however, not a strategic process. As such, the existence of a business plan with a reference to training is quite compatible with a situation in which training plays an important operational role in the enterprise but does not figure in the strategy making process.

4.4 *Mediating factors*

Organisation size

Organisation size may be defined in various ways—gross turnover, number of employees in enterprise, number of employees at worksite. The case study research indicates that the most pertinent measure of impact on training appears to be the number of employees in the enterprise. However number of employees at the worksite was also strongly associated with training variables. For the purposes of survey research the worksite is the most convenient and practical unit for sampling and eliciting information on training practices. Enterprise size and worksite size are the same in many cases and only differ in the case of multi site enterprises (which occurred in 53% of the survey sample of worksites). The following examination of relationships between organisation size and training variables is based on enterprise size (number of employees in the enterprise) as the measure of organisation size, but similar relationships are observed with other measures of organisation size.

Enterprise size has a large impact on all training variables observed in the case studies and the national survey. The survey results indicate that enterprise size is strongly associated with all six indices of training, and always in the direction observed in the case studies. Enterprise size (or worksite size) was included as a factor in the loglinear models for every training index analysed. Table 4.2 shows the relationships for each of the six indices of training.

Table 4.2
Relationships between enterprise size and training indices

Compared with small enterprises

- Large enterprises have a greater amount of training
- Large enterprises have greater diversity in training activity
- Large enterprises have more engagement with the Training Reform Agenda
- Large enterprises use more external training
- Large enterprises make greater use of formal approaches to training
- Large enterprises allow greater individual choice in training

Despite this strong relationship, staff within the enterprises studied did not perceive the size of the enterprise (or any other measure of organisation size) as a driver or inhibitor of training. This factor is therefore classified as a mediating factor rather than a direct driver of training.

The case studies provide insights on why small enterprises have less training activity. Small enterprises tend to have fewer drivers of training. For example, small enterprises are less likely to have high levels of workplace change and are less likely to have strategic plans or business plans with training clauses. Size appears to strongly influence the approach to training. This effect was shown in the survey data analysis to be in addition to the effects of the training drivers. That is, size affects training outcomes in enterprises in addition to training drivers. Small enterprises tend to use informal approaches to training (such as coaching and on-the-job training) in response to training needs, rather than more formal approaches.

Small enterprises lack a number of features found in large enterprises that promote both formal internal and external training. Broadly these features relate to the economy of scale of the enterprise. Small enterprises do not have a wide range of positions and specialisations in their job structures, and so lack internal labour markets. This means there is little incentive for employees to engage in formal internal non-accredited training. Small enterprises have fewer resources (such as training specialists and training facilities) that may be devoted to the training effort. They do not enjoy the economies of scale of large enterprises with regard to mounting formal internal training programs. It was also clear from the case studies that large enterprises often enjoyed closer relationships with training providers. Small enterprises in many cases complained that they felt isolated from the training networks of public and private providers and did not know where to turn for help in mounting training programs.

Small enterprises have fewer skilled workers compared with large enterprises. Research has shown that workers with initial post-school qualifications are more likely to engage in formal training than those without initial post-school qualifications. In Australia for enterprises with under 20 employees (small businesses) the percentage of positions requiring post-school qualifications is 18%, for enterprises of 100 or more employees (large

businesses) the figure is 32% of positions. Forty-two percent of employees in small businesses compared with fifty-one percent of employees in large businesses have post-school qualification (ABS, 1994: 34).

However, as the findings in Phase One demonstrated, the lower level of resources available to small businesses does not mean that they do not train their employees or value the importance of training to their business strategies. Training in small business is often subsumed under other activities that are not commonly recognised as training. In large organisations formal training becomes necessary to enable groups of employees to get together from time to time to enhance communications and solve problems. In small business, these communication and problem solving activities take place on an everyday basis as groups of employees work together or meet informally to solve problems. These informal and unstructured activities are not readily recognised as training either by employees or researchers, nevertheless they perform the functions that more formal training performs in large enterprises.

Industry

Industry refers to the type of activity of the enterprise. Enterprises engaged in a wide range of activities were classified according to the 'main activity' of the enterprise. The standard ANZSIC industry classifications were used in the research.

Industry is very strongly correlated to all the measures of training in the survey. However, it is a very broad concept that contains a number of other variables related to training. One such variable proposed in the Phase One research is the notion of industry traditions of training. The Phase Two case studies bore out the notion that enterprises within the same industry display many similarities in their approach to training. These constitute traditions of training in the industry. In the construction industry apprenticeship is the dominant form of training provision and is likely to remain so, as long as the industry remains structured in its present form. Similarly, the retail industry has a tradition of placing great emphasis on induction training for new employees in order to ensure that they can react effectively to customers. Thus the economic structure of the industry will be strongly related to the type and extent of training that is found in individual enterprises.

Industry may also be seen as a proxy variable of a set of training arrangements—arrangements that vary quite considerably from industry to industry. Profiles of the training arrangements for the five industry sectors of the case studies illustrated this considerable variation in arrangements. For example, entry level training for the banking and insurance industry sector relies mainly on in-house training, university and TAFE education. This stands in contrast to the construction industry sector which relies very strongly on trade apprenticeship training. The role of industry training arrangements is underlined by the emergence in some sectors of industry training strategies which aim to standardise the training across enterprises within certain industries. A good example of these more formal industry training arrangements is the Certificate in Food Processing.

Analysis of the survey data reveals that the industry variable is moderately to strongly associated with all six training indices, and industry was included in all loglinear models of training as a major factor in variation in the extent and nature of enterprise training. The training variable most strongly associated with industry was Training Reform Agenda engagement—a variable which better indicates the nature of training arrangements in place for the industry than any of the other five training variables.

Occupational structure

Occupational structure refers to the mix of occupational groups within the enterprise. A simple quantitative measure of occupational structure used in the analysis of the survey data is the proportion of managers/professionals in the enterprise's workforce. Occupational structure is closely linked to initial vocational education. Different occupations clearly require different educational qualifications in terms of length, level and content of post-school education. There is much evidence showing that workers with initial post-school qualifications are more likely to engage in formal training than those without initial post-school qualifications. Seventy-eight percent of managers/professionals in Australia have a post-school qualification—a higher percentage than any other occupational group (ABS, 1994: 34). Managers/professionals, with their high level of initial qualifications compared to other occupational groups, would be more likely to engage in subsequent training activities.

The survey data analysis confirms this link between occupational structure and subsequent training. The proportion of managers/professionals in the enterprise is associated with all six training indices examined in the survey data analysis. The strength of the association, although significant, is very low for most of the indices. However, the strength of association for reliance on external training and individualisation of training decisions is a little stronger. This result could be explained by the greater reliance on individual initiative and motivation, related to previous external post-school education, required for these two training variables.

4.5 *Training variables*

Training is the dependent variable in the model. In the survey many of the 37 questions covered various aspects of training for the enterprise or worksite. From these 37 questions six training indices were developed where each index combined the responses from two or more questions. The six training indices were split into two groups which related to the extent of training or the nature of training.

Extent of training: volume of training;
 diversity of training.

Nature of training: degree of formalisation;
 use of external training;
 individualisation in training;
 Training Reform Agenda engagement.

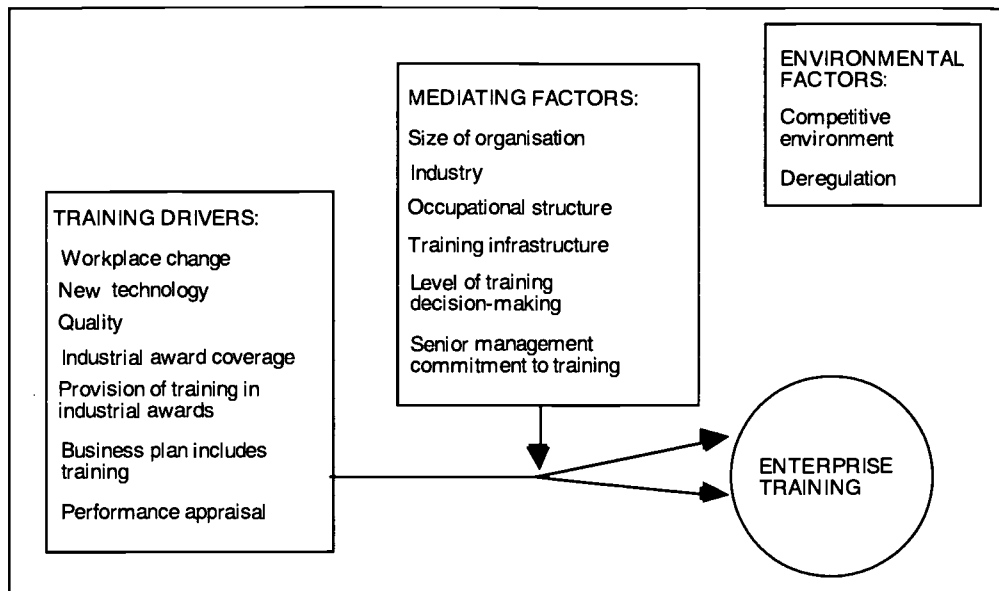
Analysis of the survey data reveals that these six training variables, with the exception of individualisation, are strongly correlated with each other. Individualisation is correlated only weakly or moderately with the other training variables. This pattern of correlations suggests that it is reasonable to suggest a broad variable of training activity, and that the concept of a general model of training is justifiable. Further analysis of the survey data could be undertaken to lend support to the notion of two variables of extent of training and nature of training. There is further discussion of these correlations in the report of the survey results (McIntyre et al., 1996).

4.6 *Main factors in the general model of training*

The previous sections have provided a description of the general model of enterprise training and several factors associated with training, as identified in the research. To provide an overview of the general model of enterprise training, the important factors and their relationships are summarised in Figure 4.4. This figure shows the general model with the main factors which were listed in Table 4.1. The broader terms for each factor are included where two or more versions exist. For example, workplace change is preferred to the narrower concept of work re-organisation, and quality is preferred to the narrower concepts of customer service or quality management.

The factors included in the general model cover all those found to be important in Phase One and Phase Two research. Although the listed factors within each category are reasonably comprehensive, other factors not tested in the research could be added to this model. For example, organisational culture is likely to be an important mediating factor for enterprise training, but this was not directly tested in the research.

Figure 4.4
Main factors in the general model of enterprise training



4.7 *Specific models of enterprise training*

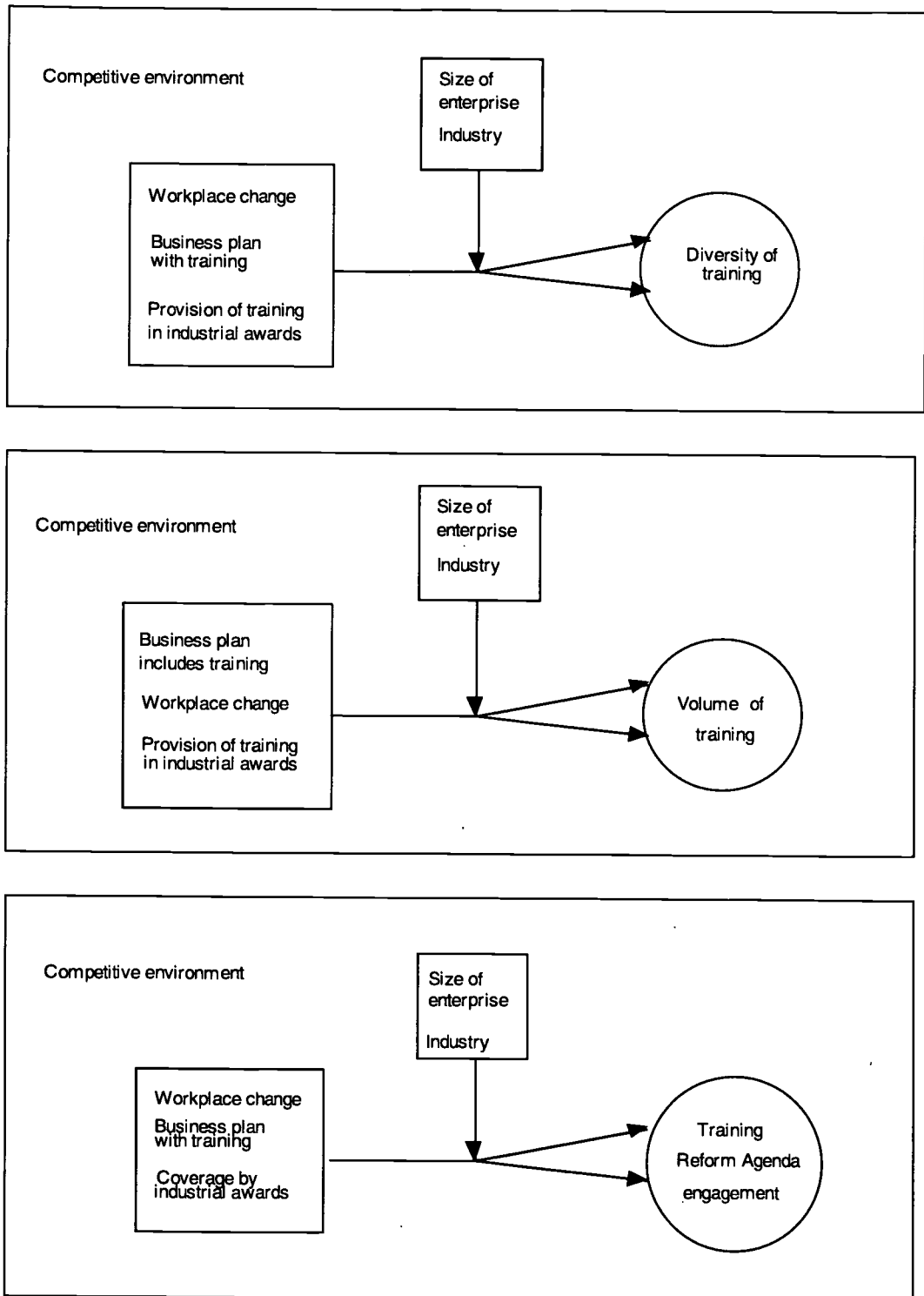
When particular aspects of training extent and character are considered, more specific models of enterprise training may be generated. The specific models are based on the general model described earlier, but exclude particular variables based on demonstrated relationships and lack of relationships between variables. For example, for training volume (an index based on training expenditure and percentage of employees undertaking training in the past year) the best model includes the following five independent variables.

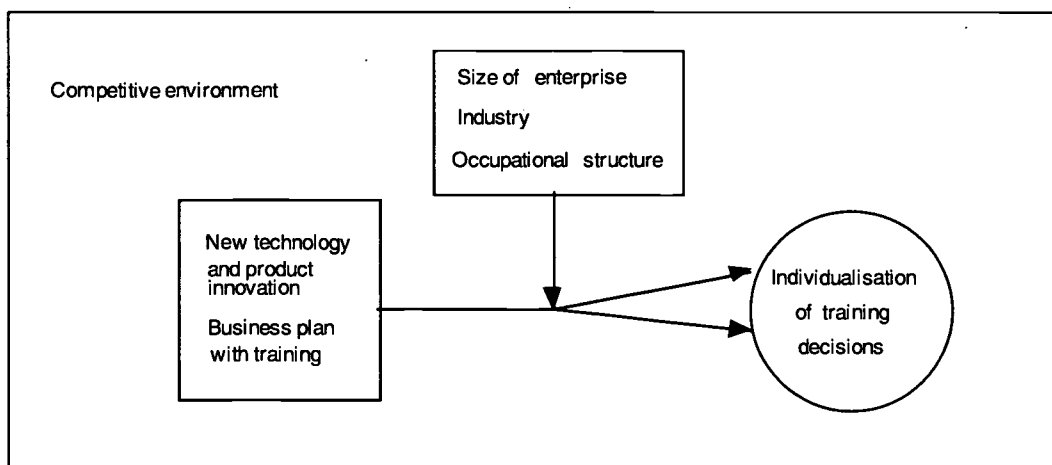
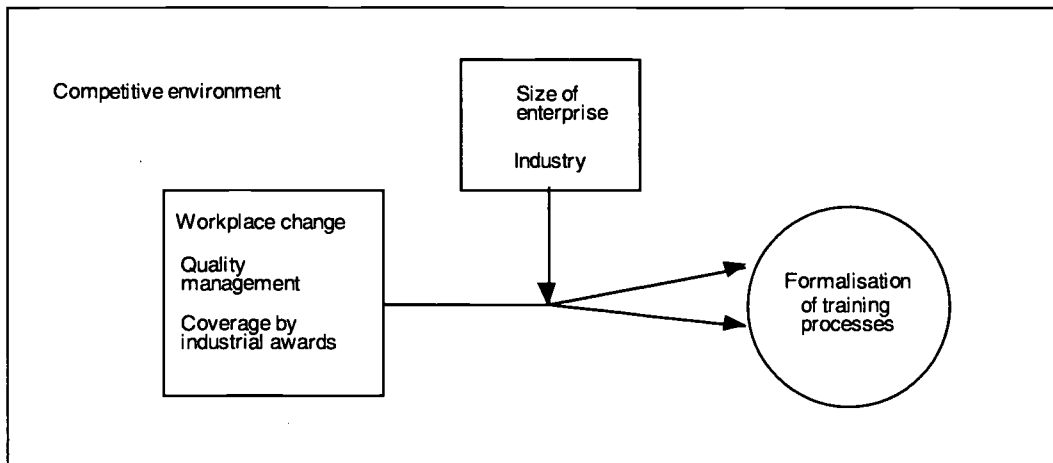
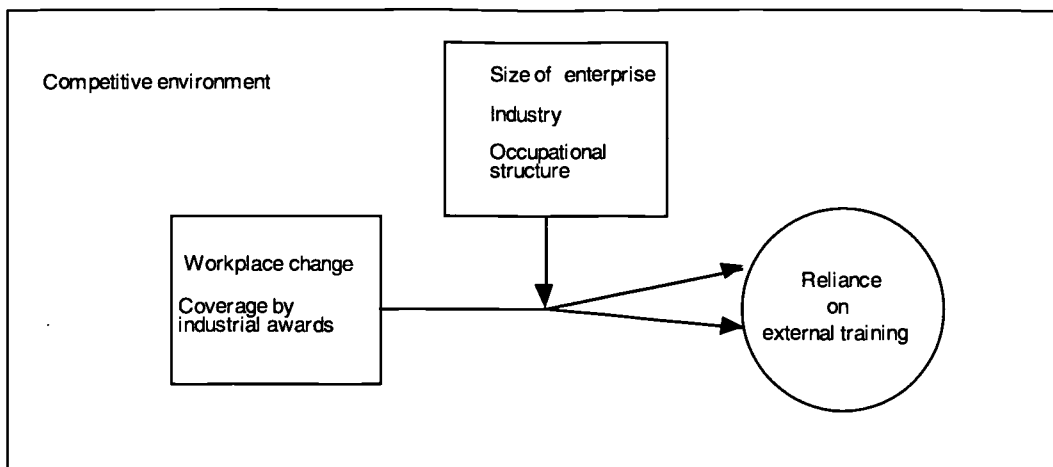
Training drivers: business plan with training;
 workplace change;
 provision of training in industrial awards.

Mediating factors: industry;
 size of enterprise.

The interactions of these variables and other training drivers may have an additional small impact, but the specific model above explains the greatest proportion of the variation in training volume. The other variables tested (including new technology, quality, industrial award coverage and occupational structure) had only a small, though statistically significant impact on training volume.

Figure 4.5
The six specific models of enterprise training





Descriptions of the specific models of training, one for each of the six indices of training, were given in Chapter 3. When factors are classified as training drivers or mediating factors, based on these definitions, six specific models are generated as shown in Figure 4.5. The figure shows the five most influential factors affecting each training variable, as determined by the multivariate analysis of the survey data. Within each box the factors are given

in order of impact on training, with the most influential factor at the top of each box.

Table 4.3 gives an overview of the relative impact of all nine factors found in the survey to influence training on the six training variables. It shows that while every factor has at least some (statistically significant) influence on each aspect of training, some factors tend to be specialised in their impact. For example, quality management (which includes ISO quality accreditation and TQM implementation) has most impact on formalisation of training processes within enterprises (eg formal needs analysis and formal training evaluations). The table also indicates that for most aspects of training, enterprise size and industry are most influential. However, workplace change is more influential than industry on diversity of training and formalisation of training processes.

Table 4.3

The relative strengths of factors (drivers and mediators) on each of the six training variables

Relative strengths are represented by symbols, • (very low) to ••••• (high).

Factor	Diversity of training	Volume of training	Training Reform engagement	Reliance on external training	Formalisation of training process	Individualisation of training decision
	DIV	VOL	TRA	EXT	FOR	IND
Size of enterprise	•••••	•••	•••••	•••	••••	•••
Industry	•••	•••	••••	•••	•••	•••
Occupational structure	•	•	•	••	•	••
Workplace change	••••	•••	•••	••	••••	•
Bus. plan with training	•••	•••	•••	•	•	•
Quality management	•	•	•	•	•••	•
New technology and product	•	•	•	•	•	••
Provision of training in ind. awards	••	••	•	•	•	•
Coverage by industrial awards	•	•	••	••	•	•

4.8 Overview

- The model of enterprise training developed in this research provides a good representation of the factors of enterprise training and their relationships. The relationships between the factors and enterprise training are strong and the model explains much of the variation in training.
- Seven drivers of training were found to be common in enterprises across most industries (see Table 4.1). Six of these factors were tested in the national survey.
- In addition to the direct drivers of training, mediating factors were found to have a large impact on the extent and character of enterprise training. Easily the most influential factors are industry sector and organisation size. Together and separately they have a strong impact on training.
- There is great diversity across enterprises in training practices and extent of training. Much of the diversity is accounted for in the variation in combinations of factors of: training driver; organisation size; and industry.

5. Implications

This study examines the ways that demand for learning and skill development is shaped within Australian enterprises. Other studies on this subject include: ABS surveys of training expenditure and of employee participation in training and education (ABS, 1989, 1990, 1994a,b,c); secondary analyses that have been conducted of the data generated by these surveys (Baker and Wooden, 1992; ABS, 1995; McKenzie and Long, 1995); case studies and surveys conducted by the Allen Consulting Group (1994) for its report to ANTA on national approaches to training reform; and analyses, using four separate survey data sources, of the links between vocational education and training, and small and medium sized enterprises carried out by Baker, Wooden and colleagues (1995).

These studies have drawn their data from different samples. They also differ in their methodologies, in the variables they have examined and in the ways in which these variables have been defined. Some look at the enterprise itself, some at those who work within enterprises, and some at both. The various perspectives resulting from these differences have enriched understanding within the field.

This study differs from other recent national studies in one important respect. It has combined within a common framework both quantitative and qualitative methods—a survey and case studies—to attempt to shed light upon the complex processes that influence both demand for learning and skill development within the enterprise, and the ways in which this is translated into specific enterprise responses. This gives the data a comprehensiveness that is missing from many other studies. For example, the survey data can shed light upon the factors that influence variation between enterprises at a set point in time. The case studies are able to shed light at the micro level upon factors that can drive change over time in the amount of training provided and in the ways in which it is delivered. The study's methodology allows some of the broader conclusions and implications derived from survey data to be tested against the reality of individual enterprises at the grass roots. This methodology also enables exploration of the variation that underlies the broad averages of survey results.

A significant feature of the present study is that it has looked at factors operating within individual worksites. A further distinguishing feature of the study is the richness of the set of dependent variables that it has used. Like most other Australian studies, this study has been concerned with the quantum of enterprises' training—whether defined by dollars spent or by workers' levels of participation. More importantly it explored the particular ways in which this demand is determined and expressed. This study explains the shape and character of demand as well as its quantity. It has focused upon factors such as: the extent to which training is formalised and regulated; the degree of influence individuals have upon training decisions; and the extent of reliance upon training sources external to the enterprise.

As a word of caution, the study is able to give only a partial picture of the totality of the demand for training that emanates from within enterprises. It has looked principally at demand for training by enterprises themselves, and much less at the quantum and nature of the demand for training by workers within enterprises.

5.1 *Training expenditure by enterprises*

The introduction of the Training Guarantee Act in 1989 resulted in an early focus within national training surveys upon enterprise training expenditure (ABS, 1990, 1994a,b,c). Culled primarily from the three major statistical surveys published by the Australian Bureau of Statistics (ABS, 1994a,b,c), the statistical data presents a rather unflattering picture of enterprise training in Australia. Expenditure, although increasing, is relatively low at about 2.9% of payroll, with the private sector spending only 2.6% in 1993. The distribution of training is skewed towards male, professional employees working in the larger enterprises especially in the public service or the professions. Finally, employers appear to adopt a rather informal approach to training, with the emphasis on on-the-job methods and relatively low investment in training infrastructure at the enterprise level.

The results from the survey in this study tend to reinforce the data from the ABS relating to training expenditure. In the survey 57% of respondents indicated that they spend between 1% and 5% of payroll on training. This figure also increases with size with 39% of larger enterprises indicating that they spend between 2% and 5% of payroll as opposed to 23% of smaller enterprises. The case studies, however, cast some doubt over the reliability of these figures. Many enterprises found it difficult to produce reliable statistics that demonstrated their expenditure. Moreover, in the absence of the requirements of the Training Guarantee for consistent reporting of training expenditure, enterprises adopted widely different interpretations of what constituted such expenditure. In particular, not all enterprises reported the cost of wages and salaries for trainees in their overall estimate of training expenditure. This, of course, led to widely differing estimates.

This emphasis on data collection in recent studies has focused public debate upon training levels. Much less attention has been given to issues relating to the character and shape of demand, which are just as important for public policy. It is equally important to know something about the types of training that enterprises will need, about their preferences for engagement with the public sector, and about their propensity to purchase training from external suppliers, as it is to know about the volume of their expenditure upon training or the proportion of their employees who engage in training.

One of the important findings from this study is that variables such as the size of the enterprise or worksite; industry; the extent of workplace change; the strategic value that an enterprise attaches to training; an enterprise's occupational structure; and its industrial relations climate; account for the ways that the enterprise engages in training just as much as they can explain the *volume* of training.

These variables have been shown to have strong explanatory power in accounting for: the diversity of the training modes in which enterprises engage; the extent to which they engage in regulated and publicly accredited training; the extent to which they depend upon external training sources; and the extent to which their training is formalised, planned and structured as opposed to informal, spontaneous and individually determined. The case studies illustrate the richness and diversity of the characteristic responses of enterprises to training demand. The survey data show that despite this diversity there is a degree of regularity and predicability that can assist public vocational education and training providers interacting with enterprises to help them respond to demands for skill enhancement.

5.2 *Change, innovation and training*

The case studies emphasise the impact on training of:

- a competitive business environment;
- the desire to provide quality customer service as a way to gain a competitive edge;
- technological innovation;
- new work organisation.

The variables were included within the survey to capture the competitiveness of an enterprise's operating environment. Although the quality imperative and technological innovation measures emerged with only weak relationships to the level and character of demand for training, it is well known from other studies (eg Shann & Fitzgerald, 1990; OECD/CERI, 1988) that these factors are powerful drivers of workplace change. The survey showed that the level of workplace change is one of the strongest predictors both of the level of enterprises' training effort and of its structure. Hence it is likely that the relatively weak predictive power of the quality, technology and competitiveness measures was the outcome of their impact largely being captured by other variables, including the measure of workplace change.

Enterprises in which: all levels of staff have experienced change in their range of tasks; decision making has become decentralised; there has been an increased emphasis upon teamwork; and internal communication has been improved (all common responses to greater competition, new production technologies and the quality imperative) are likely to spend more on training and to have more staff participate in training than those that have not experienced these changes to the same degree. However, the survey shows that such enterprises do not simply have a higher level of training effort. They also have a more diverse mix of training responses than firms that have experienced a less dynamic operating environment. Such enterprises use a wider mix of internal and external methods to develop their employees' competence, and a wider range of external education and training suppliers. They rely upon accredited courses as well as upon internal mechanisms that

foster personal development and provide education and training that ranges from support for trainees and student placements to support for TAFE and university study. Such enterprises become 'learning rich' organisations.

Firms that have experienced the greatest rates of workplace change are among the most likely to support structured training for young people, to use competency standards as a basis for training, and to formally register as a training provider. They are more likely to draw upon the resources of public, private and community based external providers, and they are more likely to formalise and evaluate their training effort.

This study provides strong empirical support for the proposition that the ongoing pace of workplace change, an increase in the competitiveness of Australia's business environment, and the globalisation of the Australian economy will result in ongoing growth in the size and diversity of the Australian training market. It provides strong support for the proposition that ongoing workplace change in Australia is likely to lead to an increase in the quality and diversity of firms' internal training and development strategies, and to an increasing interaction between firms and a range of public, private and community based providers of learning.

It is apparent from the case studies that most of the training activities generated by workplace changes focus on development of non-technical behavioural skills rather than technical skills. For example, work re-organisation towards a team based approach sometimes required further technical skills training to provide 'multi-skilled' operators. However, re-organisation towards a team based approach frequently required development of behavioural skills of working in groups and team based problem solving skills.

5.3 Industry

This study reaffirms that the industry within which an enterprise is located has a very strong bearing upon the level of its training effort. On average enterprises in some industries spend more upon training than do those in other industries, and more of their employees participate in training. This finding emerges from all ABS training expenditure and participation surveys (ABS, 1989, 1990, 1993a, 1993b) as well as from surveys of training effort conducted elsewhere (CEREQ, 1988; Lillard and Tan, 1986; see also OECD, 1991). The importance of this study is that it helps to explain why this might be so.

Clearly 'industry' is in large part a proxy for other factors that characterise and describe enterprises, rather than an independently measured set of enterprise characteristics in its own right. For instance, industries characteristically differ in the average size of the enterprises of which they are composed. Given the strong relationship between enterprise size and training consistently revealed in training effort surveys, this might account for the strong relationship between industry and training demand revealed by the study. But this is unlikely to be the case as the survey evidence shows that

within industries, enterprise size is a powerful explanatory factor in its own right. There is something about both the *size* of an enterprise and about the *character* of the industry that it is in that accounts for the level and character of training demand.

Industries characteristically differ in their average enterprise size, capital intensity, in the extent to which they are exposed to internal or international competition, in their rates of technological change, and in their occupational mix—all of which are known to be related to enterprise training effort. French data, for example, suggests that these are strongly related to training expenditure and participation (Sweet, 1989). It shows that industries that have a high proportion of qualified workers, that are at the forefront of technological change, and that operate in international markets exhibit the highest levels of training effort.

Considering the case study and survey evidence together, it appears that variation between industries in training effort has far more to do with differences in the characteristic operating environments of the firms within them, than it does with differences between industries in average firm size. The strong independent impact of the workplace change variable also suggests that these differences in operating environment are fairly specific. The evidence is not definitive, but it does suggest that the competitiveness of the business environment, the occupational mix and technological innovation are among the factors accounting for differences between industries in training demand.

The study's finding that industry is strongly related to enterprise training effort is not new. However, the finding that it is strongly and systematically related to the structure of demand for training is not something that has previously emerged from Australian research. The study has shown that as a function of the industry to which they belong, firms characteristically differ in:

- their reliance upon external training;
- their reliance upon accredited and regulated training qualifications;
- their engagement with public competency standards and training regulation arrangements;
- the range and variety of training methods that they adopt; and
- the extent to which they formalise their internal training processes.

These are important findings, for they suggest that a significant part of the reason for the explanatory power of the industry variable lies in the nature of institutional arrangements for vocational education and training, and in the particular cultures and traditions of particular industries.

Industries differ in:

- their susceptibility to technological change;
- their occupational mix and hence their skill mix; and
- the competitiveness of the environments in which they operate.

Industries, and the occupations that are differentially distributed across them, differ significantly in the extent to which they have been able to capture public agendas and public arrangements for the provision and regulation of training. These results reinforce much of the impetus for recent reforms to vocational education and training. Improvement to the quantity and quality of enterprises' skill formation practices will not flow simply from changes in the external economic and labour market environment within which they operate, or simply from their own workplace reforms. Reforms to institutional arrangements for the provision and regulation of vocational education and training, such as the wider provision of recognised programs for operative workers, are of fundamental importance. Reforms in the environment for business competition and in the markets for finance and labour stimulate a richer and more extensive enterprise response to employees' skill needs. However, these are not sufficient without complementary changes to the institutional arrangements for vocational education and training with which enterprises interact.

The importance of industry culture and traditions in shaping the demand for training should not be underestimated. This is clearly implied by the survey results (although it cannot be directly inferred from them) and it emerges as a clear finding from several of the case studies. Reliance upon apprenticeship is heavily shaped by culture and tradition, but even in industries where structured entry level training arrangements are little used (such as finance and retail pharmacy) the case studies show that industry traditions can play a strong role in determining the level and nature of training demands within a firm.

5.4 Size

Similar to the findings on the relationship between industry and the level of demand for training, the present study's finding that demand for training rises with the size of the enterprise and the size of the worksite is not new, either within Australian (Baker, 1994; Baker and Wooden, 1995) or overseas (Tan et. al., 1990) research.

Baker and Wooden's (1995) report on training in small and medium sized enterprises in many ways complements the findings of this present study. Both studies point to a heavier reliance by small and medium sized firms upon external training providers than upon internal training. Both studies emphasise the comparative lack of formalisation in the ways in which training needs are determined in smaller firms, and the converse higher degree of formalisation

of training processes in large firms. The present study shows that smaller firms characteristically rely upon a narrower range of types of training than do large firms, and this is consistent with Baker and Wooden's finding that medium sized firms use a wider range of external providers than do small firms.

Moving beyond these common findings, but not in conflict with them, the present study shows that small firms are less likely than large firms to:

- rely upon explicit competency standards when determining the content of training;
- depend upon formally accredited training;
- be registered as an accredited training provider.

The survey results clearly confirm the very strong messages that emerge from the case studies, as well as from studies conducted for the Allen Consulting Group's (1994) review of the effectiveness of national vocational education and training reforms. Small firms know and care little about some of the major planks of recent reforms to the national vocational education and training system. The study's results, both from the case studies and from the survey, suggest that this is not simply a matter of poor communication between the proponents of reform and the small firm that might be remedied by more effective marketing. It is as likely to be a matter of a poor fit between what is on offer and what is needed.

A standard economic approach to the relationship between enterprise size and the level of training demand is summarised in, but not necessarily espoused by, Baker and Wooden (1995). It suggests that the difficulties that small firms experience in capturing the benefits of economies of scale, and their relative unwillingness to fund the costs of developing portable skills the benefits of which they will not reap as the result of smaller internal labour markets account for much of the observed research findings. However were this the full story it would not account for this present study's finding that qualitative differences exist in the ways in which firm size relates to demand, over and above the relationship between firm size and the level of demand for training. Small firms do not simply have different levels of demand for training. At any given level of demand they express their demand in characteristically different ways. It is these characteristic differences that need to be more carefully addressed in shaping public policies and practices.

The survey data reveals a striking similarity in the relationships between all training variables and either enterprise size, on the one hand, or worksite size, on the other. The close similarities in the observed relationships at the worksite and enterprise level provide a hint about the most effective ways in which the external vocational education and training system (whether public, private or community based) might interact with enterprises. In most cases outcomes will be just as effective when linking with enterprises at the level of the local worksite as when linking with them at the national, State, or

enterprise level. The survey, as well as the case studies, suggest that the local worksites of large enterprises often have a fair degree of discretion in determining their training needs and how these will be responded to. Flexible institutional responses to enterprise demand would suggest an increased focus upon the needs of local worksites, whether or not these are constituent parts of large enterprises.

However a recent analysis of the ABS *Training and Education Experience Survey* (McKenzie and Long, 1995) suggests caution regarding the view that worksite size can be treated essentially as a substitute for enterprise size. The authors found that enterprise size was directly related to levels of participation in in-house and external training courses, as well as to the incidence of participation in on-the-job training; however, worksite size was not. This finding suggests that being employed at a small worksite is no disadvantage for training participation if that site is part of a fully owned chain. Arrangements such as purchasing or marketing chains, and franchising can allow workers at smaller sites to share many of the training advantages associated with large enterprises. Clearly this is an issue that merits further investigation.

5.5 *The industrial relations climate*

The case studies did not reveal industrial relations to be a major factor in the scale or structure of enterprises' training responses. The survey data suggested weak but consistently significant relationships between organisations' training effort and the extent to which working arrangements at a worksite were covered by awards and agreements, and the extent to which training provisions were included within such awards or agreements. The survey suggested that the proportion of a worksite's employees covered by awards or enterprise agreements is associated with:

- a heavier reliance upon external accredited training;
- heavier involvement in structured entry level training arrangements;
- the use of competency standards to determine training content;
- public accreditation of internal enterprise training arrangements through registration as a training provider; and
- a more formalised approach to the internal monitoring and evaluation of training.

Such findings are consistent with European experience (Lutz, 1994; Sweet, 1989) which highlights the key role played by negotiated agreements between the industry partners (at either the enterprise level, the industry level or both) in providing an institutional underpinning for enterprises' training arrangements. Also Ford (1989) and Hendry (1991) as well as the proponents of the high performance organisation in the US (Brown, Reich and Stern, 1993) have cited industrial relations or employee relations as a major factor in the

success of training in enterprises. For Ford industrial relations had to become more participatory in order to lead to higher investment in skill formation. Hendry and his colleagues at Warwick University suggested that the unions had an important role to play in monitoring the level of training in enterprises. Finally Brown et al. have supported the concept of greater employee involvement as a key ingredient in moving towards to more highly skilled organisations.

Such findings suggest that any weakening of negotiated arrangements under different institutional frameworks for industrial relations could alter the character, perhaps the scale, of enterprises' training activities. While the relationships revealed by the survey results are not strong, they are persuasive enough to at least suggest the importance of a careful ongoing monitoring at the enterprise level through mechanisms such as the Australian Centre for Industrial Relations Research and Teaching's ADAM data base. The impact upon training arrangements both of the growth of enterprise agreements and of any spread of individual contracts instead of awards and enterprise agreements also requires ongoing monitoring.

5.6 *Industry or enterprise focus?*

The findings of this study which link both the extent and nature of enterprise training with several variables of the enterprise, help to reconcile the conflict within public debate over the virtues of an 'industry focused' versus an 'enterprise focused' approach to vocational education and training. The evidence from the study strongly indicates that such debate runs the risk of artificially polarising public responses. Industries characteristically differ in the amount of training that they engage in, and they characteristically differ in the ways in which they engage in training. The case studies in particular have shown that within any given industry, enterprises shape their own course. Enterprises frequently have little regard for those industry-wide arrangements that often presume enterprise similarity and uniformity rather than enterprise diversity. However, the common characteristics of industries are powerful determinants of the level and character of training demand.

Industries differ systematically in the level and structure of their demand for training, but they are not homogenous. Putting aside idiosyncratic and unpredictable variation between enterprises, the nature of training demand will vary systematically within industries as a function of the size of the enterprise. The study has strongly illustrated how industry and enterprise size independently and jointly shape the level and character of enterprises' demand for training. A public sector response that is appropriate for a large enterprise within any one industry might not be appropriate for one that is of medium size, and neither response might be appropriate for the very small firm. Policy or program interventions that suit the small firm in one industry might not suit a comparably sized firm in another. These are common sense propositions that are frequently ignored when constructing policies or programs.

These issues are of central importance to Industry Training Advisory Bodies (ITABs) which are charged with the responsibility of identifying the training needs of the industry they represent. The results of this study support an industry by industry approach to the identification of training demand—this being the concept underlying ITABs. The study clearly found systematic variation with industry in the extent and nature of training demand. This was evident in the national survey results for all six training variables tested.

At the same time the results indicate that 'averaging' of the extent and nature of industry demand for training, though important and useful, is both problematic and of limited value because of the great diversity in training demand across enterprises within each industry. This suggests that ITABs need to obtain a broad representation of enterprise types and sizes in their decision-making, consultation and analyses of training demand. It also suggests that their advice to training providers and enterprises needs to take account of the diversity of training demand across enterprises.

The pattern of use of competency standards by enterprises illustrates the dilemma of an industry focus versus an enterprise focus in public policy on training. The national survey showed that the majority of worksites did not use competency standards—either industry-wide or enterprise based. Of those that did use competency standards, about equal numbers of worksites used national standards or enterprise standards, while fewer worksites used both.

Of the worksites surveyed, only about a quarter (26%) indicated that the worksite conducted training based on national competency standards. Industry-wide national competency standards are more likely to be used by larger worksites and accredited training providers. The low use of national standards could be explained by a general lack of acceptance of the concept of competency-based training and/or a view that the industry-wide competency standards available do not suit the individual needs of the worksite or enterprise. Evidence supporting the latter explanation is found in the survey results: 29% of worksites conducted training based on enterprise standards—slightly higher than the percentage of worksites using national competency standards.

5.7 *The enterprise or the individual?*

Public debate on vocational education and training since the late 1980s arose from reports from the Dawkins years such as *Industry Training In Australia* (Dawkins, 1989) and the Deveson report (Deveson, 1989), and that which followed the Allen Consulting Group (1994) review of the effectiveness of training reforms. Debate has often tended to assume a sharp distinction between a vocational education and training system that responds to the individual and one that responds to the enterprise or to industry. Debate has often simplistically characterised a shift from a vocational education and training system that focused on the needs of the individual during the Kangan years to one in which the needs of the individual have become subsumed by the needs of the firm or the needs of an industry. Accompanying this

presumed shift have been shifts in the ways in which demand is translated into supply.

The results of the present study suggest that a distinction between the needs of the individual and the needs of the enterprise can be quite artificial. They show that many enterprises quite deliberately vest considerable responsibility in the individual in selecting training that is to be undertaken. Within their own internal mechanisms they appear to translate demand into supply by relying upon individual employees' knowledge of their own needs and preferences, rather than by relying upon centralised employer assessment of needs. The results suggest that a reliance upon individual rather than employer expressions of need, and the negotiation between employee and employer about training needs and how these are to be responded to, can be systematically linked to some characteristics of the enterprise. This is more likely to occur in large firms, in particular industry sectors, in firms that have a high proportion of managerial and professional employees, in those that mention training in their business plans, and in those experiencing significant product and technological innovation.

Such results point to a need for vocational education and training providers to develop effective mechanisms to tap individuals' training needs, even in cases where their principal concern is the needs of the enterprise. In some instances marketing strategies aimed at the enterprise and its managers might be the most effective for translating demand into supply. However, in other instances strategies aimed at allowing individual employees to express their needs might be the best way to meet the needs of the enterprise.

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Appendix 1: Overview of Case Studies

a. Finance and insurance

Enterprise	Characteristics	Determinants of training	Impediments	Significance of training
Hume Building Society Albury	<p>Regional building society.</p> <p>Training is managed by the HR manager.</p> <p>Extensive training for new staff. No evidence that training is concentrated on a particular section of workforce.</p> <p>No systematic training needs analysis or training plan.</p> <p>Uses a broad range of external providers.</p> <p>Few employees are FSU members.</p>	<p><u>Internal</u></p> <p>Customer service Technology.</p> <p>Role in maintaining good staff morale.</p> <p>Performance appraisal.</p> <p><u>External</u></p> <p>Competitive environment.</p> <p>Industry code of practice.</p> <p>Government regulations.</p> <p>National training strategy is not important.</p>	<p>No real barriers to training.</p> <p>Some restrictions on the availability of external programs.</p> <p>Staff release a complicating factor.</p>	<p>5% of payroll.</p> <p>Budget for training is increasing.</p> <p>Important role in organisational culture.</p> <p>A tradition of training has been implanted.</p>
Westpac Sydney	<p>Major bank that is undergoing significant re-structuring.</p> <p>Change of culture to a learning enterprise. New approaches to training are at the heart of corporate strategy.</p> <p>Centralised training development team is combined with outsourcing.</p> <p>Business managers make key training decisions.</p> <p>Unionised. Current relations with FSU are generally good.</p>	<p><u>Internal</u></p> <p>Work re-organisation and redesign.</p> <p>New technology.</p> <p>Deregulation: need to offer new product services to compete.</p> <p>Strategy: customer service; quality.</p> <p>Need to look after people in the organisation.</p> <p><u>External</u></p> <p>Legislation eg 1996 Uniform Credit Act.</p> <p>National training reforms not generally understood (enterprise competencies).</p>	<p>Cynicism among staff and lack of commitment to new culture.</p> <p>Lack of training know how among managers.</p> <p>Lack of understanding of learning enterprise.</p> <p>Staff release.</p>	<p>2 to 3 % of payroll.</p> <p>Focus on learning, skill formation and outputs.</p>
St George Bank Sydney	<p>Former building society that became a bank in 1992.</p> <p>Training is managed within the HR Learning and Development Dept.</p> <p>Two week induction for new staff.</p> <p>A variety of management development programs is offered.</p> <p>Becoming more unionised.</p>	<p><u>Internal</u></p> <p>Growth strategy.</p> <p>Senior Management.</p> <p>Strong training tradition.</p> <p>Performance management system.</p> <p>Decision by employees.</p> <p>New system technology.</p> <p><u>External</u></p> <p>Competitive environment.</p> <p>National training reforms are not important.</p>	<p>No major impediments.</p> <p>Some problems of staff release and financial constraints.</p> <p>Effectiveness of classroom based training queried.</p> <p>Management attitudes.</p>	<p>3.5% of payroll.</p> <p>Corporate strategy is a primary determinant of training.</p>

Enterprise	Characteristics	Determinants of training	Impediments	Significance of training
National Mutual Retail Financial Services Melbourne	<p>Major changes being experienced (demutualisation).</p> <p>HR function is driver of cultural change.</p> <p>Emphasis on continuous learning for change.</p> <p>Central training function has been devolved.</p> <p>Individual business units support training needs of team members.</p> <p>Reliance placed on external training.</p> <p>Unionised. Enterprise agreements have been negotiated.</p>	<p><u>Internal</u></p> <p>Corporate strategy: customer focus; continuous improvement.</p> <p>Work re-organisation.</p> <p>Need for technical quality and qualifications.</p> <p><u>External</u></p> <p>Increased competition.</p> <p>Changes to regulations and legislation.</p> <p>National training reforms considered irrelevant (enterprise competency standards).</p>	<p>Current structure and work design.</p> <p>Inadequate supervisor support in some sections.</p> <p>Some staff release problems.</p>	<p>Training budget has recently been increased as part of the 'Learning Framework'.</p> <p>Training now considered to have an important role in cultural change.</p>
NRMA Sydney	<p>Australia's largest general mutual insurer.</p> <p>Training is divided between Learning & Development Branch, Technical Services Training Branch and Financial Services Division.</p> <p>Distance education is being used for training as the enterprise expands geographically.</p>	<p><u>Internal</u></p> <p>Strategy: customer focus; move to technology based services; geographic expansion.</p> <p>Company philosophy.</p> <p>Changed work organisation.</p> <p><u>External</u></p> <p>General insurance code of practice.</p> <p>National training reforms (competency based training).</p>	<p>Difficulties of arranging staff release.</p> <p>Inadequate facilities for technical services training.</p> <p>Senior management may lack understanding of training.</p>	<p>6% to 8% of payroll.</p> <p>Training is a significant function, but the system has burdens placed on it through growth and diversification.</p> <p>Substantial effort put into workplace assessor training.</p>
Sedgwick Melbourne	<p>Re-organising risk consultancy and insurance broker. Mainly corporate clients.</p> <p>The Victorian Division has its own training committee. The national training department is developing an internal consulting role.</p> <p>Management training is being given priority. A graduate trainee program operates. Well organised induction program. External providers are used extensively.</p> <p>20% of employees are FSU members.</p>	<p><u>Internal</u></p> <p>Senior management (CEO and Directors).</p> <p>Strong culture of training.</p> <p>Strategy : quality assurance; customer focus; information technology.</p> <p>Performance appraisal: individual decisions.</p> <p><u>External</u></p> <p>Professional associations.</p> <p>Strong industry culture of training.</p> <p>Industry code of practice has emerging role.</p> <p>National training reforms are not important.</p>	<p>Relatively few impediments.</p> <p>Some financial constraints and workload pressures.</p> <p>Funds and staffing are an impediment for the national training department.</p>	<p>1.4% of payroll.</p> <p>Training is central to corporate strategy.</p> <p>Considers itself to be the 'training ground' for the industry.</p>

b. Retail

Enterprise	Characteristics	Determinants of training	Impediments	Significance of training
Myer Grace Bros Melbourne	<p>Department store.</p> <p>Major re-structuring since 1993.</p> <p>Heavy reliance on part-time staff.</p> <p>Training is organised at 3 levels: national, state and store.</p> <p>Most training is run in-house. Greater emphasis on-the-job training for all levels.</p> <p>All sales staff undertake 5 days off-the-job orientation program.</p> <p>Management training is becoming less highly structured.</p> <p>Unionised. All staff are represented by SDA.</p>	<p><u>Internal</u></p> <p>Need for technical proficiency.</p> <p>Reinforce company culture or values.</p> <p>Work organisation.</p> <p>Communication.</p> <p><u>External</u></p> <p>Competitive environment.</p> <p>National training strategy impacts through:</p> <p>(a) use of competency standards (both enterprise-based and those developed by Retail Industry Training Council).</p> <p>(b) traineeships.</p>	<p>Time and cost.</p> <p>Lag between corporate re-structuring and provision of training.</p> <p>Release for training is increasingly a problem.</p>	<p>3.7% of payroll.</p> <p>Traditionally a heavy investor in training.</p> <p>Follows a structured though not necessarily systematic approach to training.</p>
Woolworths Sydney/ ACT	<p>Supermarket.</p> <p>Predominantly female workforce at store level.</p> <p>National training and development plan has been developed.</p> <p>Training is largely conducted internally by store trainers.</p> <p>On-the-job coaching.</p> <p>Induction training and mentoring.</p> <p>90% union coverage.</p>	<p><u>Internal</u></p> <p>Strategy - customer focus.</p> <p>National T & D Manager and committee.</p> <p>New technology.</p> <p>Corporate culture.</p> <p>Promotion from within.</p> <p><u>External</u></p> <p>Competitive environment.</p> <p>National training strategy impacts through:</p> <p>a) competency standards being developed.</p> <p>b) traineeships are offered.</p>	<p>Time release.</p> <p>Incorporating casual and part-time employees within the training structure.</p> <p>Lack of infrastructure in supermarkets.</p> <p>Attitude of department managers to training.</p>	<p>3 to 4% of payroll.</p> <p>Training has become more comprehensive and systematic.</p>
Mitre 10 Randwick, NSW	<p>Medium size hardware store.</p> <p>Part of national cooperative.</p> <p>High turnover of staff.</p> <p>General manager is responsible for HR function.</p> <p>On the job training is important, based on product knowledge.</p> <p>External training providers include TAFE and industry associations.</p>	<p><u>Internal</u></p> <p>Customer Focus: need for product and trade knowledge.</p> <p>Preparation of staff for management.</p> <p>New computing system; warehousing and invoicing system.</p> <p><u>External</u></p> <p>Managers and staff unaware of national training reforms.</p>	<p>No formal training infrastructure.</p> <p>Business is still in development phase.</p> <p>Staff release problems; work pressure.</p> <p>Financial constraints.</p> <p>External training inadequate.</p>	<p>Training is ad hoc: organised on a needs basis rather than part of overall strategy.</p>

Enterprise	Characteristics	Determinants of training	Impediments	Significance of training
Tolland Pharmacy Wagga Wagga, NSW	<p>Pharmacy located in a regional city.</p> <p>Sole trader.</p> <p>Stable workforce.</p> <p>Pharmacist arranges for staff to participate in training.</p> <p>External training provided by pharmaceutical associations, product manufacturers, and health departments and foundations.</p> <p>On the job training is largely informal.</p> <p>Not unionised.</p>	<p><u>Internal</u></p> <p>Culture of professional development.</p> <p>Promotions by suppliers.</p> <p>New technology.</p> <p><u>External</u></p> <p>Strong industry tradition of training.</p> <p>Pharmacy Guild.</p> <p>Legal requirements.</p> <p>Government and other public health initiatives.</p>	<p>Non-metropolitan location restricts opportunities.</p> <p>No forum for staff to discuss training needs.</p> <p>Pressure of work.</p>	<p>Just over 2% of payroll.</p> <p>Frequency of training does not necessarily amount to strong enterprise-based training culture.</p>
Newman's Motor Group Kogarah, NSW	<p>Mitsubishi motor vehicle dealer.</p> <p>Most staff are full-time.</p> <p>Managers identify training needs, evaluate effectiveness and keep profiles up to date.</p> <p>Internal training includes inductions, on-the-job and computer training.</p> <p>External training provided by private providers, Motor Traders Association and Roads & Traffic Authority.</p>	<p><u>Internal</u></p> <p>Quality management system (ISO 9002).</p> <p>Management decisions.</p> <p>New technology.</p> <p><u>External</u></p> <p>Competitive pressure.</p> <p>Introduction of new models.</p> <p>No knowledge of national competency standards.</p>	<p>High turnover of sales staff.</p> <p>Time pressures.</p> <p>Inconsistency in training by manufacturers.</p> <p>Lack of qualified trainers.</p> <p>Employees' attitudes.</p>	<p>1 to 2% of payroll.</p> <p>More than 75% of employees undertook training in 1994.</p> <p>Training is a high priority for sales staff.</p>
Sizzler Brisbane	<p>Fast food outlet.</p> <p>High proportion of part-time employees.</p> <p>Training is conducted by head office training personnel for managers.</p> <p>On-the-job training is for restaurant staff.</p>	<p><u>Internal</u></p> <p>Customer focus: quality of service and product.</p> <p>Creating an image.</p> <p><u>External</u></p> <p>Competitive pressure.</p> <p>National training reforms have had little impact.</p>	<p>Financial constraints.</p> <p>Staffing - high level of part-time staff.</p>	

Appendix 2: Summary of the Survey Questions

A1	Industry sector
A2	Industry sector - ANZSIC codes
A3	Single site or multi site organisation
A4	Worksite is head office of organisation
A5	Number of employees at worksite
A6	Number of employees in organisation
B1	Australian based or multi-national company
B2	Breakdown of staff by nature of employees
B3	Breakdown of staff by occupation
B4	Has range of tasks performed by staff changed in last three years
B5	Structural changes in the organisation in the last three years
B6	Change in level of competition for your products in last three years
B7	Percentage of products for export markets
C1	Worksite has a business plan
C2	Section in business plan on skills development and training
C3	Government regulation/licensing affect market for sales
C4	Worksite accredited or in the process of being accredited as a training provider
C5	Have adopted or are adopting total quality management
C6	Major investment in technology in the last three years
C7	New products or services in the last three years
C8	Working conditions governed by industrial awards or enterprise
C9	Proportion of workforce covered by awards
C10	Training provisions included in award or agreement
D1	Training in the past year for apprentices, trainees, placements etc
D2	Worksite contributes to fees or allows time for course attendance
D3	Informal types of training provided for worksite staff
D4	Worksite organises training by other organisation
D5	Proportion of employees involved in training
D6	Strategies to ensure adequate training
D7	Formal training infrastructure
D8	Training evaluation strategies
D9	Worksite conducts training based on national or enterprise competency standards
D10	Whether organisation is a registered training provider
D11	Percentage of payroll spent on training
D12	Perception of important factors in driving training
D13	Most important factor perceived to be driving training
D14	Position title of respondent



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